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********** STN Columbus **********
FILE 'HOME' ENTERED AT 14:43:24 ON 19 NOV 2004
=> file caba caplus embase japio lifesci medline scisearch uspatfull
=> e smith daniel j/au
E1        2   SMITH DANIEL H/AU
E2        2   SMITH DANIEL I/AU
E3      194 --> SMITH DANIEL J/AU
E4        1   SMITH DANIEL JAMES/AU
E5        1   SMITH DANIEL JOHANNES/AU
E6       20   SMITH DANIEL JOHN/AU
E7        1   SMITH DANIEL JORDAN/AU
E8        4   SMITH DANIEL JOSEPH/AU
E9        6   SMITH DANIEL K/AU
E10       5   SMITH DANIEL KEITH/AU
E11       3   SMITH DANIEL L/AU
E12       2   SMITH DANIEL L JR/AU
=> s e3-e8 and glucosyltransferase?
L1       43 ("SMITH DANIEL J"/AU OR "SMITH DANIEL JAMES"/AU OR "SMITH DANIEL
            JOHANNES"/AU OR "SMITH DANIEL JOHN"/AU OR "SMITH DANIEL JORDAN"
            /AU OR "SMITH DANIEL JOSEPH"/AU) AND GLUCOSYLTRANSFERASE?
=> dup rem l1
PROCESSING COMPLETED FOR L1
L2       40 DUP REM L1 (3 DUPLICATES REMOVED)
=> d bib ab 1-
YOU HAVE REQUESTED DATA FROM 40 ANSWERS - CONTINUE? Y/(N):y
 L2  ANSWER 1 OF 40  USPATFULL on STN
AN    2004:165910  USPATFULL
TI    Immunogenicity of glucan binding protein
IN      ***Smith, Daniel J.*** , Natick, MA, UNITED STATES
      Taubman, Martin A., Newtonville, MA, UNITED STATES
PI    US 2004127400     A1   20040701
AI    US 2003-383930    A1   20030307 (10)
PRAI  US 2002-402483P   20020808 (60)
      US 2002-363209P   20020307 (60)
DT    Utility
FS    APPLICATION
LREP  Ingrid A. Beattie, Ph.D., Mintz, Levin, Cohn, Ferris, Glovsky and
      Popeo,P.C., One Financial Center, Boston, MA, 02111
CLMN  Number of Claims: 32
ECL   Exemplary Claim: 1
DRWN  12 Drawing Page(s)
LN.CNT 3002
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB    Immunogenic compositions and subunit vaccines for dental caries are
      described which comprise peptide subunits of glucan binding protein-B
      and peptide subunits of glucan binding protein-B in combination with
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peptide subunits of ***glucosyltransferase*** . Methods of provoking an immune response to S. mutans glucan binding protein-B or ***glucosyltransferase*** . Methods of immunizing a mammal against dental caries are also described, along with antibodies which bind particular epitopes of glucan binding protein-B or ***glucosyltransferase*** .

L2 ANSWER 2 OF 40 MEDLINE on STN

AN 2004503439 IN-PROCESS

DN PubMed ID: 15472313

TI Comparative analysis of Gtf isozyme production and diversity in isolates of Streptococcus mutans with different biofilm growth phenotypes.

AU Mattos-Graner Renata O; Napimoga Marcelo H; Fukushima Kasuo; Duncan Margaret J; ***Smith Daniel J***

CS Department of Microbiology and Immunology, Piracicaba School of Dentistry, University of Campinas, Sao Paulo, Brazil.. rmgraner@fop.unicamp.br

NC R37 DE-06153 (NIDCR)

SO Journal of clinical microbiology, (2004 Oct) 42 (10) 4586-92. Journal code: 7505564. ISSN: 0095-1137.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS IN-PROCESS; NONINDEXED; Priority Journals

ED Entered STN: 20041009
Last Updated on STN: 20041022

AB Streptococcus mutans is the main pathogenic agent of dental caries. ***Glucosyltransferases*** (Gtfs) produced by these bacteria are important virulence factors because they catalyze the extracellular synthesis of glucans that are necessary for bacterial accumulation in the dental biofilm. The diversity of GtfB and GtfC isozymes was analyzed in 44 genotypes of S. mutans that showed a range of abilities to form biofilms in vitro. Several approaches were used to characterize these isozymes, including restriction fragment length polymorphism analysis of the gtfB and gtfC genes, zymographic analysis of the identified GtfB and GtfC genotypes, and quantitation of isozyme production in immunoblot experiments with specific monoclonal antibodies. A high diversity of gtf genes, patterns of enzymatic activity, and isozyme production was identified among the isolates tested. GtfC and, to a lesser extent, GtfB were produced in significantly higher amounts by strains that had high biofilm-forming ability than by strains with low biofilm-forming ability. Biofilm formation was independent of the GtfB and GtfC genotype. Atypical strains that showed an apparent single Gtf isozyme of intermediate size between GtfB and GtfC were also identified. The results indicate that various expression levels of GtfB and GtfC isozymes are associated with the ability of distinct S. mutans genotypes to grow as biofilms, strengthening the results of previous genetic and biochemical studies

performed with laboratory strains. These studies also emphasize the need to identify factors that control gtf gene expression.

L2 ANSWER 3 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:737524 CAPLUS
DN 139:259950
TI Streptococcal glucan binding protein-B and ***glucosyltransferase*** and fragments for inducing antibodies against dental caries
IN ***Smith, Daniel J.*** ; Taubman, Martin A.
PA The Forsyth Institute, USA
SO PCT Int. Appl., 49 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2003075845	A2	20030918	WO 2003-US6962	20030307
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2004127400	A1	20040701	US 2003-383930	20030307
PRAI US 2002-363209P	P	20020307		
US 2002-402483P	P	20020808		

AB Immunogenic compns. and subunit vaccines for dental caries are described which comprise peptide subunits of glucan binding protein-B and peptide subunits of glucan binding protein-B in combination with peptide subunits of ***glucosyltransferase*** . Methods of provoking an immune response to S. mutans glucan binding protein-B or ***glucosyltransferase*** . Methods of immunizing a mammal against dental caries are also described, along with antibodies which bind particular epitopes of glucan binding protein-B or ***glucosyltransferase*** .

L2 ANSWER 4 OF 40 MEDLINE on STN
AN 2003510820 MEDLINE
DN PubMed ID: 14587678
TI Caries vaccines for the twenty-first century.
AU ***Smith Daniel J***
CS Department of Immunology, The Forsyth Institute, Boston, MA 02115, USA..

dsmith@forsyth.org

NC DE-01653 (NIDCR)
DE-04733 (NIDCR)
DE/AI-12324 (NIDCR)

SO Journal of dental education, (2003 Oct) 67 (10) 1130-9.
Journal code: 8000150. ISSN: 0022-0337.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Dental Journals; Priority Journals

EM 200311

ED Entered STN: 20031101
Last Updated on STN: 20031113
Entered Medline: 20031112

AB Can infection with the dental caries pathogen, Streptococcus mutans, be intercepted or modified immunologically? Resolving this question requires answers to many questions: What are the pathways by which this cariogenic streptococcus enters and accumulates in the dental biofilm? Can bacterial components associated with virulence induce immune responses? What is the level of maturity of immune pathways in the oral cavity of the young child at the time of infection? Can immune strategies deal effectively with chronic S. mutans infections? Are these vaccines safe? Many such questions have been answered. For example, preclinical application of modern methods of mucosal vaccine design and delivery has routinely resulted in protection from dental caries caused by S. mutans infection, using antigens involved in the sucrose-independent or sucrose-dependent mechanisms of infection by these cariogenic streptococci. Passive administration of antibody to functional epitopes of S. mutans virulence antigens has also provided a degree of protection in preclinical studies and small-scale human investigations. The caries-protective capacity of active immunization with dental caries vaccines now awaits proof of principle in pediatric clinical trials.

L2 ANSWER 5 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1

AN 2001:886776 CAPLUS

DN 136:36332

TI Synthetic peptide vaccines for dental caries

IN ***Smith, Daniel J.*** ; Taubman, Martin A.

PA USA

SO U.S. Pat. Appl. Publ., 17 pp., Cont.-in-part of U.S. 5,686,075.
CODEN: USXXCO

DT Patent

LA English

FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI US 2001048926 A1 20011206 US 1997-967573 19971110
US 5686075 A 19971111 US 1993-57162 19930430
EP 1266662 A2 20021218 EP 2002-17131 19930430
EP 1266662 A3 20030528
R: BE, CH, DE, DK, FR, GB, IT, LI, NL, SE, IE
PRAI US 1992-877295 B2 19920501
US 1993-57162 A2 19930430
EP 1993-910953 A3 19930430
AB Vaccine compns. and immunogenic compns. are described which are ***glucosyltransferase*** subunit vaccines for dental caries and which contain at least one peptide which corresponds to a sequence of ***glucosyltransferase*** contg. aspartate 413, aspartate 415 or both aspartate 413 and aspartate 415. These subunit vaccines elicit antibodies which protect an immunized mammal from dental caries. Methods of provoking an immune response to intact ***glucosyltransferase*** are also described.

L2 ANSWER 6 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:790994 CAPLUS
DN 136:66856
TI Cloning of the Streptococcus mutans gene encoding glucan binding protein B and analysis of genetic diversity and protein production in clinical isolates
AU Mattos-Graner, Renata O.; Jin, Song; King, William F.; Chen, Tsute; ***Smith, Daniel J.*** ; Duncan, Margaret J.
CS Department of Immunology, The Forsyth Institute, Boston, MA, 02115, USA
SO Infection and Immunity (2001), 69(11), 6931-6941
CODEN: INFIBR; ISSN: 0019-9567
PB American Society for Microbiology
DT Journal
LA English
AB Streptococcus mutans, the primary etiol. agent of dental caries, produces several activities that promote its accumulation within the dental biofilm. These include ***glucosyltransferases*** , their glucan products, and proteins that bind glucan. At least three glucan binding proteins have been identified, and GbpB, the protein characterized in this study, appears to be novel. The gbpB gene was cloned and the predicted protein sequence contained several unusual features and shared extensive homol. with a putative peptidoglycan hydrolase from group B streptococcus. Examn. of gbpB genes from clin. isolates of S. mutans revealed that DNA polymorphisms, and hence amino acid changes, were limited to the central region of the gene, suggesting functional conservation within the amino and carboxy termini of the protein. The GbpB produced by clin. isolates and lab. strains showed various distributions between cells and culture medium, and amts. of protein produced by individual strains correlated pos. with their ability to grow as biofilms in an in vitro assay.

RE.CNT 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 7 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:549186 CAPLUS
DN 135:255748
TI Facilitated intranasal induction of mucosal and systemic immunity to mutans streptococcal ***glucosyltransferase*** peptide vaccines
AU ***Smith, Daniel J.*** ; King, William F.; Barnes, Leigh A.; Trantolo, Debra; Wise, Donald L.; Taubman, Martin A.
CS Department of Immunology, The Forsyth Institute, Boston, MA, 02115, USA
SO Infection and Immunity (2001), 69(8), 4767-4773
CODEN: INFIBR; ISSN: 0019-9567
PB American Society for Microbiology
DT Journal
LA English
AB Synthetic peptide vaccines which are derived from functional domains of Streptococcus mutans ***glucosyltransferases*** (GTF) have been shown to induce protective immunity in Sprague-Dawley rats after s.c. injection in the salivary gland region. Since mucosal induction of salivary immunity would be preferable in humans, the authors explored methods to induce mucosal antibody in the rat to the GTF peptide vaccines HDS and HDS-GLU after intranasal administration. Several methods of facilitation of the immune response were studied: the incorporation of peptides in bioadhesive poly(D,L-lactide-coglycolide) (PLGA) microparticles, the use of monoepitopic (HDS) or diepitopic (HDS-GLU) peptide constructs, or the use of mucosal adjuvants. Salivary IgA responses were not detected after intranasal administration of diepitopic HDS-GLU peptide constructs in alum or after incorporation into PLGA microparticles. However, significant primary and secondary salivary IgA and serum IgG antibody responses to HDS were induced in all rats when cholera holotoxin (CT) or a detoxified mutant Escherichia coli heat-labile enterotoxin (R192G LT) were intranasally administered with HDS peptide constructs in PLGA. Coadministration of LT with HDS resulted in predominantly IgG2a responses in the serum, while coadministration with CT resulted in significant IgG1 and IgG2a responses to HDS. Serum IgG antibody, which was induced to the HDS peptide construct by coadministration with these adjuvants, also bound intact mutans streptococcal GTF in an ELISA and inhibited its enzymic activity. Thus, immune responses which are potentially protective for dental caries can be induced to peptide-based GTF vaccines after mucosal administration if combined with the CT or LT R192G mucosal adjuvant.
RE.CNT 57 THERE ARE 57 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 8 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:473678 CAPLUS

DN 135:209564

TI Diepitopic construct of functionally and epitopically complementary peptides enhances immunogenicity, reactivity with ***glucosyltransferase*** , and protection from dental caries

AU Taubman, Martin A.; Holmberg, Cynthia J.; ***Smith, Daniel J.***

CS Department of Immunology, The Forsyth Institute, Boston, MA, 02115, USA

SO Infection and Immunity (2001), 69(7), 4210-4216
CODEN: INFIBR; ISSN: 0019-9567

PB American Society for Microbiology

DT Journal

LA English

AB Coimmunization with peptide constructs from catalytic (CAT) and glucan-binding (GLU) domains of ***glucosyltransferase*** (GTF) of mutans streptococci has resulted in enhanced levels of antibody to the CAT construct and to GTF. The authors designed and synthesized a diepitopic construct (CAT-GLU) contg. two copies of both CAT (B epitope only) and GLU (B and T epitope) peptides. The immunogenicity of this diepitopic construct was compared with that of individual CAT and GLU constructs by immunizing groups of Sprague-Dawley rats s.c. in the salivary gland vicinity with the CAT-GLU, CAT, or GLU construct or by treating rats by sham immunization. Levels of serum IgG antibody to GTF or CAT in the CAT-GLU group were significantly greater than in GLU- or CAT-immunized groups. Immunization with CAT-GLU was compared to coimmunization with a mixt. of CAT and GLU in a second rodent expt. under a similar protocol. CAT-GLU immunization resulted in serum IgG and salivary IgA responses to GTF and CAT which were greater than after coimmunization. Immunization with the diepitopic construct and communization with CAT and GLU constructs showed proliferation of T lymphocytes to GTF. Immunization with either the CAT or GLU construct has been shown to elicit significant protection in a rodent dental caries model. Similarly in this study, the enhanced response to GTF after immunization with the CAT-GLU construct resulted in protective effects on dental caries. Therefore, the CAT-GLU diepitopic construct can be a potentially important antigen for a caries vaccine, giving rise to greater immune response than after immunization with CAT, GLU, or a mixt. of the two.

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 9 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:282559 CAPLUS

DN 133:41850

TI Coimmunization with complementary ***glucosyltransferase*** peptides results in enhanced immunogenicity and protection against dental caries

AU Taubman, Martin A.; ***Smith, Daniel J.*** ; Holmberg, Cynthia J.; Eastcott, Jean W.

CS Department of Immunology, The Forsyth Institute, Boston, MA, 02115, USA

SO Infection and Immunity (2000), 68(5), 2698-2703
CODEN: INFIBR; ISSN: 0019-9567
PB American Society for Microbiology
DT Journal
LA English
AB Peptide constructs from the catalytic (CAT) and glucan-binding (GLU) regions of the mutans streptococcal ***glucosyltransferase*** enzymes (GTF) can provide immunity to dental caries infection. A strategy of coimmunization was tested to det. whether protection could be enhanced. Rats were immunized with one of the previously described peptide constructs from the CAT or GLU region of the GTF of mutans streptococci or coimmunized with a combination of these constructs (CAT-GLU). Coimmunized animals demonstrated significantly higher serum IgG and salivary IgA antibody levels to CAT or GTF than rats immunized with either construct alone. To assess the functional significance of coimmunization with these constructs, animals were immunized as above or with Streptococcus sobrinus GTF and then infected with S. sobrinus to explore the effects of immunization on immunol., microbiol., and disease (dental caries) parameters. Serum antibody from the communized group inhibited S. sobrinus GTF-mediated insol. glucan synthesis in vitro above that of the individual-construct-immunized groups. Immunization with CAT or GLU constructs resulted in significantly reduced dental caries after infection with S. sobrinus compared with sham-immunized animals. Coimmunization produced greater redns. in caries than after immunization with either CAT or GLU. Also, significant elevations in lymphocyte proliferative responses to CAT, GLU, and GTF were obsd. after coimmunization with CAT-GLU compared with the responses after immunization with the individual constructs. The results suggested that increased nos. of memory T cells, which could proliferate to CAT, were generated by coimmunization. The expts. support the functional significance of these GTF domains in dental caries pathogenesis and present coimmunization as a simple alternative to intact GTF to enhance protective immunity against cariogenic microorganisms.
RE.CNT 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 10 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:672601 CAPLUS
DN 131:298658
TI Conjugate vaccines for the prevention of dental caries
IN Lees, Andrew; Taubman, Martin A.; ***Smith, Daniel J.***
PA USA
SO PCT Int. Appl., 54 pp.
CODEN: PIXXD2
DT Patent
LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9952548	A2	19991021	WO 1999-US7828	19990409
WO 9952548	A3	19991202		
W: AU, CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2325338	AA	19991021	CA 1999-2325338	19990409
AU 9934864	A1	19991101	AU 1999-34864	19990409
AU 761927	B2	20030612		
EP 1069909	A2	20010124	EP 1999-916570	19990409
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002511422	T2	20020416	JP 2000-543158	19990409
PRAI US 1998-81315P	P	19980410		
WO 1999-US7828	W	19990409		

AB The present invention provides glucan-based compns. and methods for stimulating an immune response against mutans Streptococci components and vaccines and methods for the treatment and prevention of dental caries. In a preferred embodiment, a glucan polymer is covalently bound to one or more T cell-dependent antigens to form a conjugate vaccine. The T cell-dependent antigen preferably contains epitopes of one or more mutans streptococcal proteins, such as a ***glucosyltransferase*** . Moreover, one or more moieties, including haptens, may be conjugated to the glucan or to the glucan-T cell-dependent compn. In a preferred embodiment, these moieties are peptides which contain immunogenic epitopes corresponding to components of a mutants streptococcus.

L2 ANSWER 11 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1999:768706 CAPLUS

DN 132:62850

TI Protective immunity against Streptococcus mutans infection in mice after intranasal immunization with the glucan-binding region of S. mutans glycosyltransferase

AU Jespersgaard, Christina; Hajishengallis, George; Huang, Yan; Russell, Michael W.; ***Smith, Daniel J.*** ; Michalek, Suzanne M.

CS Department of Microbiology, University of Alabama at Birmingham, Birmingham, AL, 35294, USA

SO Infection and Immunity (1999), 67(12), 6543-6549
CODEN: INFIBR; ISSN: 0019-9567

PB American Society for Microbiology

DT Journal

LA English

AB Here the authors present the construction and characterization of a chimeric vaccine protein combining the glucan-binding domain (GLU) of the

gtfB-encoded water-insol. glucan-synthesizing ***glucosyltransferase*** enzyme (GTF-I) from Streptococcus mutans and thioredoxin from Escherichia coli, which increases the soly. of coexpressed recombinant proteins and stimulates proliferation of murine T cells. The protective potential of intranasal (i.n.) immunization with this chimeric immunogen was compared to that of the GLU polypeptide alone in a mouse infection model. Both immunogens were able to induce statistically significant mucosal (salivary and vaginal) and serum responses which were sustained to the end of the study (exptl. day 100). Following infection with S. mutans, sham-immunized mice maintained high levels of this cariogenic organism (.apprx.60% of the total oral streptococci) for at least 5 wk. In contrast, animals immunized with the thioredoxin-GLU chimeric protein (Thio-GLU) showed significant redn. (>85%) in S. mutans colonization after 3 wk. The animals immunized with GLU alone required 5 wk to demonstrate significant redn. (>50%) of S. mutans infection. Evaluation of dental caries activity at the end of the study showed that mice immunized with either Thio-GLU or GLU had significantly fewer carious lesions in the buccal enamel or dentinal surfaces than the sham-immunized animals. The protective effects against S. mutans colonization and caries activity following i.n. immunization with GLU or Thio-GLU are attributed to the induced salivary IgA anti-GLU responses. Although in general Thio-GLU was not significantly better than GLU alone in stimulating salivary IgA responses and in protection against dental caries, the finding that the GLU polypeptide alone, in the absence of any immunoenhancing agents, is protective against disease offers a promising and safe strategy for the development of a vaccine against caries.

RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 12 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1999:291237 CAPLUS

DN 131:84814

TI Antibody to ***glucosyltransferase*** induced by synthetic peptides associated with catalytic regions of .alpha.-amylases

AU ***Smith, Daniel J.*** ; Heschel, Rhonda L.; King, William F.; Taubman, Martin A.

CS Department of Immunology, Forsyth Dental Center, Boston, MA, 02115, USA

SO Infection and Immunity (1999), 67(5), 2638-2642
CODEN: INFIBR; ISSN: 0019-9567

PB American Society for Microbiology

DT Journal

LA English

AB We examd. the immunogenicity and induction of inhibitory activity of 19-mer synthetic peptides which contained putative catalytic regions that were assocd. with the .beta.5 (EAW) and .beta.7 (HDS) strand elements of the suggested (.beta.,.alpha.)8 catalytic barrel domain of Streptococcus

mutans ***glucosyltransferase*** (GTF). Both peptides readily induced serum IgG (IgG) and salivary IgA antipeptide activity which was reactive both with the inciting peptide and with intact S. mutans GTF. Antisera to each peptide construct also inhibited the ability of S. mutans GTF to synthesize glucan. These observations support the existence of catalytic subdomains contg. glutamate and tryptophan (EAW) or aspartate and histidine (HDS) residues, each of which have been suggested to be involved with the catalytic activity of GTF. Furthermore, the epitopes defined in these sequences have significant immunogenicity and can induce immune responses which interfere with GTF-mediated glucan synthesis.

RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 13 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1999:83306 CAPLUS

DN 130:266096

TI Functional and immunogenic characterization of two cloned regions of Streptococcus mutans ***glucosyltransferase*** I

AU Jespersgaard, Christina; Hajishengallis, George; Greenway, Terrence E.; ***Smith, Daniel J.*** ; Russell, Michael W.; Michalek, Suzanne M.

CS Departments of Microbiology, University of Alabama at Birmingham, Birmingham, AL, 35294, USA

SO Infection and Immunity (1999), 67(2), 810-816
CODEN: INFIBR; ISSN: 0019-9567

PB American Society for Microbiology

DT Journal

LA English

AB ***Glucosyltransferase*** (GTF) enzymes of mutans streptococci are considered virulence factors due to their ability to synthesize adhesive glucans, which facilitate cell-to-cell adherence and accumulation. In this study we report the cloning, expression, and characterization of the catalytic (CAT) and glucan-binding (GLU) domains of S. mutans GTF-I encoded by gtfB. The CAT and GLU polypeptides represent amino acid residues 253 to 628 and 1183 to 1473, resp., of S. mutans GTF-I. Antibodies to recombinant CAT and GLU were generated in rabbits and purified by affinity chromatog. Purified anti-CAT antibodies significantly inhibited water-insol. glucan synthesis by S. mutans and S. sobrinus GTFs. The purified anti-GLU antibodies significantly inhibited both water-insol. and water-sol. glucan synthesis by S. mutans GTFs. These results demonstrate that anti-CAT and anti-GLU antibodies are capable of inhibiting a variety of GTF activities. Since antibodies to S. mutans in saliva are implicated in protection against disease, we next assessed the ability of CAT and GLU polypeptides to induce mucosal antibody responses in mice. Intranasal (i.n.) immunization of mice with CAT showed significantly elevated levels of specific IgG antibody activity in serum and specific IgA antibody activity in serum, saliva, vaginal

washes, and fecal samples. GLU immunized animals showed significantly elevated levels of specific IgA antibody activity in serum and vaginal secretions. Taken together, these results demonstrate that the recombinant CAT and GLU polypeptides are effective in inducing both mucosal and systemic immune responses. The ability of these polypeptides to induce a mucosal IgA immune response in mice after i.n. immunization supports their use as subunit vaccine candidates in the development of an anticaries vaccine.

RE.CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 14 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1998:711576 CAPLUS

DN 130:78492

TI Structural and antigenic characteristics of Streptococcus sobrinus glucan binding proteins

AU ***Smith, Daniel J.*** ; King, William E.; Wu, Christine D.; Shen, Bella I.; Taubman, Martin A.

CS Department of Immunology, Forsyth Dental Center, Boston, MA, 02115, USA

SO Infection and Immunity (1998), 66(11), 5565-5569
CODEN: INFIBR; ISSN: 0019-9567

PB American Society for Microbiology

DT Journal

LA English

AB Three purified glucan binding proteins (GBP-2, GBP-3, and GBP-5) from Streptococcus sobrinus 6715 were compared structurally by mass spectroscopy of tryptic fragments and antigenically by Western blot anal. with rat antisera to each GBP or to peptides contg. putative glucan binding epitopes of mutans streptococcal ***glucosyltransferases*** . Structural and antigenic analyses indicated that GBP-3 and GBP-5 are very similar but that both are essentially unrelated to GBP-2. None of these S. sobrinus GBPs appeared to have a strong antigenic relationship with GBPs from Streptococcus mutans. Thus, S. sobrinus GBP-2 and GBP-3 appear to be distinct proteins with potentially different functions. S. sobrinus GBP-5 may be a proteolytic fragment of GBP-3, or, alternatively, the genes coding for these proteins may be closely related.

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 15 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2

AN 1997:735840 CAPLUS

DN 128:21853

TI Synthetic peptide vaccines for dental caries

IN Taubman, Martin A.; ***Smith, Daniel J.***

PA Forsyth Dental Infirmary for Children, USA

SO U.S., 11 pp., Cont.-in-part of U.S. Ser. No. 877,295, abandoned.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5686075	A	19971111	US 1993-57162	19930430
EP 1266662	A2	20021218	EP 2002-17131	19930430
EP 1266662	A3	20030528		
R: BE, CH, DE, DK, FR, GB, IT, LI, NL, SE, IE				
US 2001048926	A1	20011206	US 1997-967573	19971110
PRAI US 1992-877295	B2	19920501		
EP 1993-910953	A3	19930430		
US 1993-57162	A2	19930430		

AB Immunization of animals with a compn. contg. either an amino acid sequence from the catalytic domain of ***glucosyltransferase*** , an amino acid sequence from the glucan-binding region of ***glucosyltransferase*** or an amino acid sequence from the native surface domain of ***glucosyltransferase*** provoke antibody and T-cell immune responses to this enzyme. Since this enzyme has been implicated in the colonization of mutans streptococci on tooth surfaces, such immune responses are important for the prevention of dental caries. Multicomponent and multivalent compns. which include these amino acid sequences provide effective vaccine capabilities.

L2 ANSWER 16 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1997:730327 CAPLUS

DN 128:33475

TI Immunogenicity and protective immunity induced by synthetic peptides associated with a catalytic subdomain of mutans group streptococcal ***glucosyltransferase***

AU ***Smith, Daniel J.*** ; Shoushtari, Babak; Heschel, Rhonda L.; King, William F.; Taubman, Martin A.

CS Dep. Immunology, Forsyth Dental Center, Boston, MA, 02115, USA

SO Infection and Immunity (1997), 65(11), 4424-4430

CODEN: INFIBR; ISSN: 0019-9567

PB American Society for Microbiology

DT Journal

LA English

AB We examd. the immunogenicity and induction of protective immunity of two 19-mer sequences (GGY and AND) which overlapped a highly conserved region which has recently been implicated in the enzymic activity of ***glucosyltransferases*** (GTFs) of the mutans group streptococci. These peptides were synthesized as eight-branched constructs on a lysine core. Serum IgG antibody, induced by s.c. (salivary gland vicinity) injection with these peptide constructs, reacted with the inciting

antigen, with mutans streptococcal GTFs, and with a 21-mer peptide (CAT) contg. an aspartate previously shown to covalently bind sucrose. Several of these antisera also inhibited the ability of Streptococcus sobrinus GTF to synthesize insol. glucan. Significant levels of salivary IgA antibody were also induced by GGY and AND peptide constructs after s.c. injection. The effect of immunization with the GGY and AND peptide constructs on the cariogenicity of Streptococcus mutans was studied in three expts. by immunization of weanling Sprague-Dawley rats, twice at 7- to 14-day intervals with peptides, S. sobrinus GTF, or phosphate-buffered saline. All rats were then orally infected with S. mutans SJ. After 63-day infection periods, the GGY and AND-injected groups had significant dental caries redns. compared with sham-injected groups in most expts. These studies support the existence of an addnl. catalytic subdomain within the sequence defined by the GGY and AND peptides. Furthermore, the epitopes defined in these sequences have significant immunogenicity, can induce immune responses which interfere with GTF-mediated glucan synthesis in vitro, and can protect rats from exptl. dental caries.

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 17 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1996:455159 CAPLUS

DN 125:112292

TI Experimental immunization of rats with a Streptococcus mutans 59-kilodalton glucan-binding protein protects against dental caries

AU ***Smith, Daniel J.*** ; Taubman, Martin A.

CS Dep. Immunol., Forsyth Dental Cent., Boston, MA, 02115, USA

SO Infection and Immunity (1996), 64(8), 3069-3073
CODEN: INFIBR; ISSN: 0019-9567

PB American Society for Microbiology

DT Journal

LA English

AB Glucan-binding proteins (GBPs) are theor. important in the mol. pathogenesis of dental caries caused by Streptococcus mutans. The present study evaluated the ability of antibody induced by the S. mutans 59-kDa GBP (GBP59) to affect dental caries caused by exptl. infection with S. mutans in a rodent model. Groups of 20-day-old rats were injected twice at 9-day intervals s.c. in the salivary gland vicinity with GBP59, ***glucosyltransferase*** (GTF), or phosphate-buffered saline (sham injection), each incorporated in an adjuvant. Two weeks after the second injection, GBP59- and GTF-injected rats contained significant levels of salivary IgA and serum IgG antibody to the resp. injected antigens. However, cross-reacting antibody to S. mutans GTF or GBP59 was not induced by the resp. antigen. Rats were then orally infected with S. mutans. After 71 days of infection, GBP59- and GTF-injected groups had smaller nos. of S. mutans on their molar surfaces, compared with the sham-injected

infected group. Total, sulcal, and smooth-surface molar caries in the GBP59- and GTF-immunized S. mutans-infected groups were each significantly lower (P .ltoreq. 0.003) than the resp. measures of caries in the sham injected infected group. The results of this investigation demonstrate that immunization with S. mutans GBP59 induces an immune response in rats that can interfere with the accumulation of S. mutans and can reduce the level of dental caries caused by this cariogenic streptococcus. Furthermore, the protective immunity induced by either GBP59 or GTF appears to result from antibodies to independent epitopes since these two S. mutans components do not have a close antigenic relationship.

L2 ANSWER 18 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1995:718968 CAPLUS

DN 123:141125

TI Immunization of rats with synthetic peptide constructs from the glucan-binding or catalytic region of mutans streptococcal glycosyltransferase protects against dental caries

AU Taubman, Martin A.; Holmberg, Cynthia J.; ***Smith, Daniel J.***

CS Dep. Immunol., Forsyth Dental Cent., Boston, MA, 02115, USA

SO Infection and Immunity (1995), 63(8), 3088-93
CODEN: INFIBR; ISSN: 0019-9567

PB American Society for Microbiology

DT Journal

LA English

AB Previously, peptide constructs were described from 2 regions of ***glucosyltransferase*** (GTF) of mutans streptococci. A putative catalytic site in the amino-terminal half of the mol. and a repeated glucan-binding site in the carboxyl-terminal half of GTF were the regions upon which sequences were based. The present study explored the effects of immunization with these peptide constructs (called CAT or GLU) and with streptococcal GTFs from Streptococcus sobrinus and S. mutans on immunol., microbiol., and disease parameters. Groups of immunized Sprague-Dawley rats were infected with either 108 S. sobrinus 6715 or 108 S. mutans SJ32 organisms. Serum IgG antibody levels, detd. by ELISA, to the resp. peptide constructs and to the appropriate streptococcal GTF were significantly increased (after immunization) prior to infection and at the end of the expt. Also, serum antibody from CAT-, GLU-, and S. sobrinus GTF-immunized rats inhibited S. sobrinus GTF-mediated insol. glucan synthesis (all) and S. mutans GTG-mediated sol. glucan synthesis (all except anti-GLU) from sucrose. Immunization with the CAT or GLU peptide construct resulted in significantly reduced smooth surface and sulcal caries after infection with S. sobrinus. Sulcal dental caries after infection with S. mutans SJ32 was also significantly reduced in CAT- and GLU-immunized rats. Thus, immunization with peptides whose sequences are based on putative functional domains of mutans streptococcal GTF are protective toward a cariogenic S. sobrinus or S. mutans infection.

L2 ANSWER 19 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1995:970032 CAPLUS

DN 124:84183

TI Potential for ***glucosyltransferase*** -based synthetic peptides in a dental caries vaccine

AU ***Smith, Daniel J.*** ; Taubman, Martin A.

CS Department of Immunology, Forsyth Dental Center, Boston, MA, 02115, USA

SO Advances in Experimental Medicine and Biology (1995), 371B, 1157-9
CODEN: AEMBAP; ISSN: 0065-2598

DT Journal

LA English

AB The antigenicity and immunogenicity of MAP constructs contg. 4 copies of peptides derived from sequences assocd. with the glucan-binding or catalytic domains of ***glucosyltransferase*** were studied in humans and rats. Both constructs reacted with several human serum IgG and salivary IgA antibody samples, and were immunogenic in rats, giving rise to high levels of anti-peptide serum IgG. These results are discussed in the context of developing a vaccine for dental caries.

L2 ANSWER 20 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1995:970029 CAPLUS

DN 124:53208

TI Development of salivary IgA antibody to oral streptococcal antigens associated with virulence

AU ***Smith, Daniel J.*** ; Taubman, Martin A.

CS Department of Immunology, Forsyth Dental Center, Boston, MA, 02115, USA

SO Advances in Experimental Medicine and Biology (1995), 371B, 1141-3
CODEN: AEMBAP; ISSN: 0065-2598

DT Journal

LA English

AB The authors studied the relationship between the initial infection with Streptococcus mutans and the appearance of the salivary antibody to streptococcal antigens that may be involved in colonization (***glucosyltransferase*** , glucan-binding protein, and antigen I/II).

L2 ANSWER 21 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1995:230260 CAPLUS

DN 122:29544

TI Immunological characteristics of a synthetic peptide associated with a catalytic domain of mutans streptococcal ***glucosyltransferase***

AU ***Smith, Daniel J.*** ; Taubman, Martin A.; King, William F.; Eida, Stephen; Powell, Jonathan R.; Eastcott, Jean

CS Dep. Immunol., Forsyth Dental Center, Boston, MA, 02115, USA

SO Infection and Immunity (1994), 62(12), 5470-6
CODEN: INFIBR; ISSN: 0019-9567

PB American Society for Microbiology

DT Journal

LA English

AB The immunogenicity of a multiple antigenic peptide construct consisting of four copies of the synthetic 21-mer peptide DANFDSIRVDAVDNVDADLLQ was measured. The compn. of this peptide was derived from a sequence in the N-terminal region of mutans streptococcal ***glucosyltransferases*** (GTFs) contg. an aspartic acid implicated in catalysis. The peptide (CAT) construct was synthesized as a tetramer on a lysine backbone and s.c. injected into Sprague-Dawley rats for polyclonal antibody formation or i.p. injected into BALB/c mice, and then spleen cell fused with Sp2/0Ag14 murine myeloma cells for monoclonal antibody formation. The resulting rat antisera and mouse monoclonal antibodies reacted with CAT and with native GTF isoenzymes from Streptococcus sobrinus and Streptococcus mutans (in ELISA and Western blot [immunoblot] analyses). Functional inhibition of the water-insol. glucan synthetic activity of S. sobrinus GTF-I was demonstrated with an IgM anti-CAT monoclonal antibody (>80% inhibited) and with rat sera (approx. 17% inhibited). The monoclonal antibody prepn. also modestly inhibited the water-sol. glucan synthetic activity of an S. mutans GTF mixt. These results suggest that the CAT peptide contains B-cell epitopes that are similar to those of intact mutans streptococcal GTFs and has the potential to elicit antibody that can inhibit GTF function. Thus, sequences within this peptide construct may have value for inclusion in a synthetic dental caries vaccine.

L2 ANSWER 22 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1994:86402 CAPLUS

DN 120:86402

TI Synthetic peptide vaccines for dental caries

IN Taubman, Martin A.; ***Smith, Daniel J.***

PA Forsyth Dental Infirmary for Children, USA

SO PCT Int. Appl., 37 pp.
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9322341	A1	19931111	WO 1993-US4094	19930430
W: CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 638092	A1	19950215	EP 1993-910953	19930430
EP 638092	B1	20021204		
R: BE, CH, DE, DK, FR, GB, IE, IT, LI, NL, SE				
JP 07506374	T2	19950713	JP 1993-519549	19930430
EP 1266662	A2	20021218	EP 2002-17131	19930430

EP 1266662 A3 20030528

R: BE, CH, DE, DK, FR, GB, IT, LI, NL, SE, IE

PRAI US 1992-877295 A 19920501

EP 1993-910953 A3 19930430

WO 1993-US4094 W 19930430

AB Immunization of animals with a compn. contg. either an amino acid sequence from the catalytic domain, glucan-binding region, and native surface domain of ***glucosyltransferase*** (I) provoke antibody and T-cell immune responses to this enzyme. Since this enzyme has been implicated in the colonization of mutans streptococci on tooth surfaces, such immune responses are important for the prevention of dental caries. Sequences of synthetic I-derived peptides are included. The immunogenicity of the synthetic peptides was detd. in rats, as was reactivity of T and B lymphocytes to I in human.

L2 ANSWER 23 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1993:578862 CAPLUS

DN 119:178862

TI Antigenicity and immunogenicity of a synthetic peptide derived from a glucan-binding domain of mutans streptococcal ***glucosyltransferase***

AU ***Smith, Daniel J.*** ; Taubman, Martin A.; Holmberg, Cynthia F.; Eastcott, Jean; King, William F.; Ali-Salaam, Pia

CS Dep. Immunol., Forsyth Dent. Cent., Boston, MA, 02115, USA

SO Infection and Immunity (1993), 61(7), 2899-905

CODEN: INFIBR; ISSN: 0019-9567

DT Journal

LA English

AB The immunogenicity and antigenicity of a multiply antigenic peptide construct contg. four copies of the synthetic peptide TGAQTIKGQKLYFKANGQQVKG were measured in rodents and humans, resp. The compn. of this peptide construct (termed GLU) was derived from a major repeating sequence in the C-terminal region of mutans streptococcal ***glucosyltransferases*** that synthesize water-insol. glucan (GTF-I). The GLU peptide elicited high levels of serum IgG antibody to GLU after s.c. injection into Sprague-Dawley rats. These antisera also reacted with intact GTF isoenzymes from Streptococcus sobrinus and Streptococcus mutans (by ELISA and Western blot [immunoblot] analyses) and with an 87-kDa glucan-binding protein from S. sobrinus (by Western blot). The synthesis of filter-retained glucan by GTF-Sd of S. sobrinus could be inhibited (30%) by preincubation with anti-GLU rat serum. Splenic and lymph node lymphocytes from rats injected once with S. sobrinus GTF isoenzymes demonstrated proliferation after 5 days of culture with GLU. The GLU peptide reacted with 4 of 29 human parotid saliva samples and 5 of 29 human serum samples (by ELISA). These results suggest that the GLU peptide contains B- and T-cell epitopes that are similar to those of intact mutans streptococcal GTFs and possibly certain other glucan-binding

proteins as well. Since antibody to this epitope(s) appears to inhibit GTF function, sequences within this peptide construct may have value for inclusion in a synthetic dental caries vaccine.

L2 ANSWER 24 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1986:495855 CAPLUS
DN 105:95855
TI Caries immunity and immune responses to Streptococcus mutans ***glucosyltransferase***
AU Taubman, Martin A.; ***Smith, Daniel J.*** ; Ebersole, Jeffrey L.; Stack, Wendy E.; Tsukuda, Tomio; Trocme, Marie C.
CS Dep. Immunol., Forsyth Dent. Cent., Boston, MA, 02115, USA
SO Mol. Microbiol. Immunobiol. Streptococcus Mutans, Proc. Int. Conf. "Cell., Mol. Clin. Aspects Streptococcus Mutans" (1986), Meeting Date 1985, 279-86. Editor(s): Hamada, Shigeyuki. Publisher: Elsevier, Amsterdam, Neth.
CODEN: 55CZAF
DT Conference
LA English
AB Extirpation of Peyer's patches and/or mesenteric lymph nodes dramatically decreased the serum IgA response to S. mutans ***glucosyltransferase*** (GTF) in rats. Also, neonatally thymectomized or congenitally athymic rats produced little or no salivary antibody response to GTF. Athymic animals were more susceptible to dental caries than normal controls; however, immunization with anti-GTF antibodies reduced susceptibility to caries in both groups.

L2 ANSWER 25 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1985:539981 CAPLUS
DN 103:139981
TI Salivary IgA antibody to ***glucosyltransferase*** in man
AU ***Smith, Daniel J.*** ; Taubman, M. A.; Ebersole, J. L.
CS Dep. Immunol., Forsyth Dent. Cent., Boston, MA, 02115, USA
SO Clinical and Experimental Immunology (1985), 61(2), 416-24
CODEN: CEXIAL; ISSN: 0009-9104
DT Journal
LA English
AB Parotid salivas of 97 young adults were screened for IgA antibody to ***glucosyltransferase*** (GTF) from lab. strains of Streptococcus mutans (serotypes c and g). Antibody levels to GTF from serotype c pos. correlated with levels to serotype-g GTF among these salivas. GTFs were prepd. from S. mutans obtained from a subset of individuals in this population. All but 1 saliva showed IgA antibody activity to all of the GTF tested. In addn., the relative magnitude of each subject's antibody level was generally the highest to the GTF from his own S. mutans. Fractions enriched for IgA by (NH4)2SO4 pptn. and gel filtration showed

patterns of functional inhibition of GTF activity which were consistent with patterns of IgA antibody activity in ELISA of unfractionated salivas. These data indicate that (1) detectable levels of IgA antibody to S. mutants GTF exist in many young adult salivas, (2) while this IgA antibody activity reacts with GTF from different biotypes, subjects generally show the highest secretory IgA antibody levels to their own GTF, and (3) the relative amt. of IgA antibody to GTF and the ability to inhibit GTF activity are roughly correlated.

L2 ANSWER 26 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1984:435199 CAPLUS
DN 101:35199
TI ***Glucosyltransferase***
IN Taubman, Martin A.; ***Smith, Daniel J.***
PA Forsyth Dental Infirmary for Children, USA
SO PCT Int. Appl., 12 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 8401170	A1	19840329	WO 1983-US1359	19830909
W: JP, US				
RW: AT, BE, CH, DE, FR, GB, LU, NL, SE				
US 4438200	A	19840320	US 1982-416869	19820913
CA 1183477	A1	19850305	CA 1983-420426	19830128
EP 118547	A1	19840919	EP 1983-903053	19830909
EP 118547	B1	19910116		
R: AT, BE, CH, DE, FR, GB, LI, NL, SE				
JP 59501696	T2	19841011	JP 1983-503130	19830909
JP 04040989	B4	19920706		
AT 60086	E	19910215	AT 1983-903053	19830909

PRAI US 1982-416869 19820913
EP 1983-903053 19830909
WO 1983-US1359 19830909

AB ***Glucosyltransferase*** (I) useful for immunization against dental caries is prepd. by culturing Streptococcus mutans in a medium contg. glucose and dialyzable nutrients and recovering I from the supernatant of the cultured cells by using a H2O-insol. polyglucan matrix. I is concd. and purified by Sepharose CL-4B gel filtration using 6M guanidine-HCl for elution. Thus, I is prepd. from the supernatant of S. mutans cultures by admixing the supernatant with H2O-insol. Sephadex beads prepd. by crosslinking dextrans of Leuconostoc mesenteroides with epichlorohydrin. After recovery and washing, the I-Sephadex bead complex is treated with a denaturing solvent (6M guanidine-HCl for 2 h at 37.degree.) to disrupt the

complex and provide a l-denaturing solvent mixt.

L2 ANSWER 27 OF 40 USPATFULL on STN
AN 84:15901 USPATFULL
TI Method for the preparation of glucosylranferase
IN Taubman, Martin A., Newton, MA, United States
Smith, Daniel J. , Natick, MA, United States
PA Forsyth Dental Infirmary for Children, Boston, MA, United States (U.S. corporation)
PI US 4438200 19840320
AI US 1982-416869 19820913 (6)
DT Utility
FS Granted
EXNAM Primary Examiner: Shapiro, Lionel M.
LREP Crowley, Richard P.
CLMN Number of Claims: 14
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 284
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A method of preparing a purified ***glucosyltransferase*** (GTF) for use in immunization against dental caries, which method comprises: culturing a Streptococcus mutans in a medium containing glucose and dialyzable nutrients to form a mixture of culture cells and supernatant; recovering the supernatant by the removal of the culture cells; admixing the recovered supernatant with a water-insoluble, polymerized polysaccharide as solid particulate material for a period of time, to provide a GTF, solid particulate complex; recovering the GTF complex in solid particulate form by filtration; washing the solid GTF complex to remove unbound GTF and medium components; removing GTF from the solid particulate material by a denaturing solvent; recovering the water-insoluble particulate material for reuse in the method; and recovering the GTF from the water-insoluble polysaccharide and purifying the recovered GTF.

L2 ANSWER 28 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1983:468750 CAPLUS
DN 99:68750
TI Adjuvants for secretory immune responses
AU Taubman, Marin A.; Ebersole, Jeffrey L.; ***Smith, Daniel J.*** ; Stack, Wendy
CS Dep. Immunol., Forsyth Dent. Cent., Boston, MA, 02115, USA
SO Annals of the New York Academy of Sciences (1983), 409(Secretory Immune Syst.), 637-49
CODEN: ANYAA9; ISSN: 0077-8923
DT Journal

LA English

AB Salivary IgA responses of rats receiving synthetic muramyl dipeptide (MDP) were elevated after oral ***glucosyltransferase*** (GTF) antigen administration and after infection with Streptococcus mutans bearing surface GTF. Intragastric (i.g.) administration (but not injection) of MDP enhanced salivary IgA responses to i.g. GTF. S.c. injection (but not i.g. administration) of MDP enhanced IgA responses to GTF injected in the vicinity of the salivary gland. Conjugation of MDP to GTF did not enhance the secretory response to the antigen. Nevertheless salivary gland vicinity administration of ovalbumin in incomplete Freund's adjuvant dramatically enhanced the secretory and serum responses. Injection of MDP may further enhance the secretory response. The combination of routes of adjuvant and antigen administration were crit. in selectively enhancing a secretory immune response.

L2 ANSWER 29 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1984:470647 CAPLUS

DN 101:70647

TI Protective aspects of immune response to ***glucosyltransferase*** in relation to dental caries

AU Taubman, Martin A.; ***Smith, Daniel J.*** ; Ebersole, Jeffrey L.; Hillman, Jeffrey D.

CS Dep. Immunol., Forsyth. Dent. Cent., Boston, MA, 02115, USA

SO Glucosyltransferases, Glucans, Sucrose Dent. Caries, [Workshop] (1983), Meeting Date 1982, 249-58. Editor(s): Doyle, R. J.; Ciardi, J. E. Publisher: IRL, Washington, D. C.
CODEN: 51ZJAK

DT Conference

LA English

AB Antibody to ***glucosyltransferase*** (GTF) can interfere with Streptococcus mutans accumulation in dental plaques both in vitro and in vivo. The redns. in caries subsequent to the interference with accumulation can be correlated with salivary IgA antibody. The redns. in caries or lesions extend beyond serotype boundaries. Studies of antibody to GTF in vitro provided extensive evidence demonstrating the mode of this antibody function in vivo. Antibody to S. mutans enhanced the permeability of plaque such that either diffusion of acid away from the surface and/or diffusion of buffer ions toward the surface was facilitated. Further studies with antibody to GTF-I indicated the water-insol. polyglucans (WIP) synthesized by GTF were preferentially inhibited and that water-sol.-polyglucans were not inhibited. Thus, immunol. interference with dental caries caused by S. mutans can now be explained on the mol. level. Antibody to GTF interferes with bacterial accumulation, and preferentially inhibits WIP synthesis. This inhibition results in a more porous plaque. Thus, the reduced levels of caries seen in immunized rodents could be the result of fewer bacteria secreting acid

in a more porous plaque.

L2 ANSWER 30 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1984:470646 CAPLUS
DN 101:70646
TI Adjuvants, glucosytransferase and caries vaccine
AU Ebersole, Jeffrey L.; Taubman, Martin A.; ***Smith, Daniel J.***
CS Dep. Immunol., Forsyth Dent. Cent., Boston, MA, 02115, USA
SO Glucosyltransferases, Glucans, Sucrose Dent. Caries, [Workshop] (1983), Meeting Date 1982, 241-8. Editor(s): Doyle, R. J.; Ciardi, J. E. Publisher: IRL, Washington, D. C.
CODEN: 51ZJAK
DT Conference
LA English
AB Regulation of salivary IgA (SIgA) responses to ***glucosyltransferase*** (GTF) from Streptococcus mutans was examd. in the rat. T-cell depletion of rat via neonatal thymectomy (Tx) resulted in a lack of ability to respond to GTF in soln. with SIgA antibodies. Likewise, the Tx rats exhibited a significantly decreased response to GTF when presented on the surface of S. mutans. Further studies indicated that particulate GTF antigen bound to its product (water-insol. polysaccharide) was more efficient at eliciting SIgA antibodies than sol. antigen. Studies of the effect of adjuvants on the SIgA antibody response showed that Al(OH)3, complete Freund's adjuvant, and muramyl dipeptide enhanced SIgA antibody prodn. when injected locally or administered intragastrically.

L2 ANSWER 31 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1984:470645 CAPLUS
DN 101:70645
TI Antigenic relatedness of ***glucosyltransferases*** from Streptococcus mutans and Streptococcus sanguis
AU ***Smith, Daniel J.*** ; Taubman, Martin A.; Ebersole, Jeffrey L.
CS Dep. Immunol., Forsyth Dent. Cent., Boston, MA, 02115, USA
SO Glucosyltransferases, Glucans, Sucrose Dent. Caries, [Workshop] (1983), Meeting Date 1982, 223-30. Editor(s): Doyle, R. J.; Ciardi, J. E. Publisher: IRL, Washington, D. C.
CODEN: 51ZJAK
DT Conference
LA English
AB The antigenic relationships among ***glucosyltransferases*** (GTF) from S. mutans were investigated using techniques measuring the binding of antibody to radiolabeled GTF or to GTF attached to polystyrene, or measuring the ability of antibody to inhibit GTF activity. IgG antibody to GTF from serotype c or g strains of S. mutans could bind to or inhibit the activity of GTF from homologous serotypes. However, IgG antibody to GTF from the g serotype reacted more strongly with GTF from serotypes a,

d, and g than from serotypes c and e. Conversely, IgG antibody to GTF from the c serotype reacted best with GTF from serotypes c and e. Measurement of antibody activity in saliva generally revealed the same relationships. However, broad cross-protection was obsd. when these relationships were explored in vivo. The in vitro binding of IgG antibody to S. mutans GTF was low but significant for GTF from S. sanguis strains 10558, H7PR3, and 34. IN vivo, significantly fewer rodents immunized with S. mutans GTF and subsequently challenged with S. sanguis H7PR3 remained infected compared with sham-immunized and challenged control groups. However, immunization with GTF from S. sanguis 34 did not influence the course of infection or disease after infection with cariogenic S. mutans.

L2 ANSWER 32 OF 40 USPATFULL on STN
AN 81:8080 USPATFULL
TI Method of preparing a purified ***glucosyltransferase***
IN Taubman, Martin A., Newton, MA, United States
Smith, Daniel J. , Natick, MA, United States
PA Forsyth Dental Infirmary for Children, Boston, MA, United States (U.S. corporation)
PI US 4250262 19810210
AI US 1979-103590 19791214 (6)
RLI Continuation of Ser. No. US 1978-956847, filed on 2 Nov 1978, now abandoned which is a division of Ser. No. US 1978-879432, filed on 21 Feb 1978, now patented, Pat. No. US 4150116, issued on 17 Apr 1979
DT Utility
FS Granted
EXNAM Primary Examiner: Shapiro, Lionel M.
LREP Crowley, Richard P.
CLMN Number of Claims: 13
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1795
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Immunization of animals with preparations containing more purified forms of ***glucosyltransferase*** (GTF) results in the presence of antibody in saliva demonstrable by functional inhibitions of enzyme activity and binding of radioactive enzyme. Serum antibody was also present. Immunized groups of animals had lower mean caries scores than comparably sham-immunized or nonimmunized control groups. Local immunization with GTF of serotype c or g of a Streptococcus mutans reduces the colonization, caries, and lesions caused by infection with S. mutans of serotype g (strain 6715) or c, or with serotype g or c, or with serotype a or g, respectively.

L2 ANSWER 33 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 3
AN 1979:454528 CAPLUS

DN 91:54528

TI Immunization against dental caries with ***glucosyltransferase*** antigens

IN Taubman, Martin A.; ***Smith, Daniel J.***

PA Forsyth Dental Infirmary for Children, USA

SO U.S., 18 pp.
CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 4150116	A	19790417	US 1978-879432	19780221
CA 1152000	A1	19830816	CA 1979-322048	19790221
US 4250262	A	19810210	US 1979-103590	19791214

PRAI US 1978-879432 19780221
US 1978-956847 19781102

AB Immunization of animals with prepns. contg. bacterial ***glucosyltransferase***, resulted in the presence of antibody in saliva demonstrable by functional inhibition of enzyme activity and binding of radioactive enzyme. Serum antibody was also present. Immunized groups of animals had lower mean caries scores than comparably sham-immunized or nonimmunized control groups. Local immunization with ***glucosyltransferase*** of serotype c or g of a Streptococcus mutans reduced the colonization, caries, and lesions caused by infection with S. mutans of serotype g (strain 6715) or c, or with serotype g or c, or with serotype a or g, resp.

L2 ANSWER 34 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1979:163806 CAPLUS

DN 90:163806

TI Preparation of ***glucosyltransferase*** from Streptococcus mutans by elution from water-insoluble polysaccharide with a dissociating solvent

AU ***Smith, Daniel J.*** ; Taubman, Martin A.; Ebersole, Jeffrey L.

CS Dep. Immunol., Forsyth Dent. Cent., Boston, MA, USA

SO Infection and Immunity (1979), 23(2), 446-52
CODEN: INFIBR; ISSN: 0019-9567

DT Journal

LA English

AB ***Glucosyltransferase*** (I) was obtained by dissocn. from water-insol. polysaccharide in the presence of 6M guanidine-HCl. Water-insol. polysaccharide was synthesized by cell-free culture supernatants from S. mutans strain 6715. Gel filtration of I on a column of 8% agarose in phosphate buffer, followed by filtration on a column of 4% crosslinked agarose in 6M guanidine-HCl, gave a 23-fold enrichment of the enzyme. The enriched I prepn. contained 22% carbohydrate and eluted

at a position corresponding to a mol. wt. of 422,000. Polyacrylamide gel electrophoresis revealed 2 regions which stained for protein, formed water-insol. polysaccharide in the presence of sucrose, and pptd. with antiserums directed to crude I prepns. The guanidine-eluted enzyme could be primed by 5 .times. 10-5 M dextran T10. High-mol.-wt. glucan and a possible glucan-binding protein were also obtained after the final gel filtration step in addn. to I.

L2 ANSWER 35 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1980:4595 CAPLUS
DN 92:4595
TI Effect of oral administration of ***glucosyltransferase*** antigens on experimental dental caries
AU ***Smith, Daniel J.*** ; Taubman, Martin A.; Ebersole, Jeffrey L.
CS Dep. Immunol., Forsyth Dent. Cent., Boston, MA, 02115, USA
SO Infection and Immunity (1979), 26(1), 82-9
CODEN: INFIBR; ISSN: 0019-9567
DT Journal
LA English
AB The effect of oral administration of sol. antigen prepns. contg. ***glucosyltransferase*** on dental caries in hamsters was studied. Immunization was accomplished by feeding ***glucosyltransferase*** for 21 - 27 consecutive days. This immunization regimen resulted in the formation of salivary antibody, which was detected by functional inhibition of enzymic activity and by a modified enzyme-linked immunosorbent assay. A serum response also occurred in 2 of the 3 expts. performed. After infection with cariogenic Streptocccus mutans strain 6715, ***glucosyltransferase*** -fed hamsters had significantly fewer S. mutans cells recoverable from molar surfaces on 6 of 9 occasions, compared with buffer-fed control groups. Hamsters orally immunized with ***glucosyltransferase*** also always had lower mean caries scores and mean nos. of lesions than comparably infected sham-immunized groups. Thus, significant protection from exptl. dental caries can be accomplished by oral administration of sol. antigen prepns. contg. ***glucosyltransferase*** .

L2 ANSWER 36 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1980:162036 CAPLUS
DN 92:162036
TI The effects of local immunization with streptococcus mutans enzymic antigens on experimentally induced dental caries in rats
AU Taubman, Martin A.; ***Smith, Daniel J.*** ; Ebersole, Jeffrey L.
CS Dep. Immunol., Forsyth Dent. Cent., Boston, MA, USA
SO Report (1978), NIDR/CR-79/05; Order No. PB-298912, 48 pp. Avail.: NTIS From: Gov. Rep. Announce. Index (U. S.) 1979, 79(24), 78
DT Report

LA English

AB Immunization of rats with ***glucosyltransferase*** (GTF) from strain 6715 (PF6,7 and 9) or strain Ingbritt (PF10) or with whole cells from strains HS6, 6715 and Ingbritt (PF8) resulted in inhibition of GTF and radioactive GTF binding prior to infection and at the termination of these expts. Some redns. in S. mutans recovered were obsd. The homologous aspects of these observations were confirmed in germfree (G4) and hamster (H7) models. A degree of cross-protection was obsd. among serotypes of mutans when either whole cells (H8) or crude GFT antigens (PF9 and 10) were used for injection. GTF enzymes were prepd. from S. mutans strains E49 (serotype a), Ingbritt (serotype c) and 6715 (serotype g) by guanidine-HCl elution from water-insol. polysaccharide. GTF from S. mutans 6715 contained a single protein component and glucan. Immunization of hamsters with GTF from S. mutans E49 resulted in redns. in dental caries caused by homologous (E49) and heterologous (6715) serotypes and also redns. in S. mutans organisms recovered (H8). Tx rats immunized with whole cells had fewer caries and lesions than sham-immunized Tx rats but more disease than normal rats immunized in the same fashion. Thus, tx rats have a compensatory IgM response.

L2 ANSWER 37 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1979:101788 CAPLUS

DN 90:101788

TI Antibody binding of ***glucosyltransferase*** enzyme preparations from homologous and heterologous serotypes of S. mutans

AU Taubman, Martin A.; ***Smith, Daniel J.*** ; Ebersole, Jeffery L.

CS Dep. Immunol., Forsyth Dent. Cent., Boston, MA, USA

SO Advances in Experimental Medicine and Biology (1978), 107(Secretory Immun. Infect.), 317-25
CODEN: AEMBAP; ISSN: 0065-2598

DT Journal

LA English

AB Rat salivary IgA and serum IgG antibodies to ***glucosyltransferase*** (GTF) from serotypes a, c, and g of Streptococcus mutans reacted with the serotypically unrelated (heterologous) GTF in enzyme- and radioimmunoassays. For example, the anti-serotype c GTF serum was .apprx.66% cross-reactive with serotype g. However, salivary anti-serotype g had no effect on serotype c GTF enzyme activity. Immunization against dental caries is discussed.

L2 ANSWER 38 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1979:70442 CAPLUS

DN 90:70442

TI Cross-protective aspects of ***glucosyltransferase*** antigens in the hamster caries model

AU ***Smith, Daniel J.*** ; Taubman, Martin A.; Ebersole, Jeffrey L.

CS Dep. Immunol., Forsyth Dent. Cent., Boston, MA, USA

SO Advances in Experimental Medicine and Biology (1978), 107(Secretory Immun. Infect.), 271-9
CODEN: AEMBAP; ISSN: 0065-2598

DT Journal

LA English

AB ***Glucosyltransferases*** (GTF) from Streptococcus mutans serotypes a and g were closely related antigenically but were more distantly related to GTF of serotype c. Local immunization with GTF from serotype c reduced the colonization, caries, and lesions caused by infection with the homologous strain compared with sham-injected controls. Local immunization with GTF of serotype c reduced the colonization, caries, and lesions caused by infection with S. mutans serotype g (strain 6715).

L2 ANSWER 39 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1977:119154 CAPLUS

DN 86:119154

TI Effects of local immunization with ***glucosyltransferase*** fractions from Streptococcus mutans on dental caries in rats and hamsters

AU Taubman, Martin A.; ***Smith, Daniel J.***

CS Dep. Immunol., Forsyth Dent. Cent., Boston, MA, USA

SO Journal of Immunology (1977), 118(2), 710-20
CODEN: JOIMA3; ISSN: 0022-1767

DT Journal

LA English

AB The effect of local immunization with ***glucosyltransferase*** enzymes of S. mutans on dental caries in conventional rats, hamsters, and gnotobiotic rats was studied. Injection of these animals with crude or defined ***glucosyltransferase*** enzyme prepns. incorporated into complete Freund's adjuvant consistently produced antibody in saliva demonstrable by functional inhibition of enzymatic activity and binding of radioactive enzyme. Serum antibody was also present. The immunized group of animals always had lower mean caries scores than comparably sham-immunized or nonimmunized control groups. Hamsters immunized with a defined enzyme prepn., contg. no more than 3 antigenic components (2 of which were enzyme), also demonstrated significant redns. in mean caries scores. The nos. of lesions were also always lower in immunized animals. In some cases there were redns. in the nos. of S. mutans that could be recovered from the teeth of immunized, infected animals. The redns. in dental caries and lesions were greater on smooth dental surfaces than on occlusal surfaces, which might be explained as interference with adherence phenomena demonstrated by S. mutans. It is proposed that antibody interference affects dental caries caused by this organism.

L2 ANSWER 40 OF 40 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1977:87568 CAPLUS

DN 86:87568

TI Antigenic relatedness of ***glucosyltransferase*** enzymes from Streptococcus mutans

AU ***Smith, Daniel J.*** ; Taubman, Martin A.

CS Dep. Immunol., Forsyth Dent. Cent., Boston, MA, USA

SO Infection and Immunity (1977), 15(1), 91-103
CODEN: INFIBR; ISSN: 0019-9567

DT Journal

LA English

AB The antigenic relation of ***glucosyltransferases*** (GTF) produced by different serotypes of S. mutans was studied by using a functional inhibition assay. Rat, rabbit, or hamster immune fluids, directed to cell-assocd. or supernatant-derived GTF, were tested against (NH4)2SO4-pptd. culture supernatants contg. GTF from 7 strains of S. mutans representing 6 different serotypes. An antigenic relationship was shown to exist among GTF from serotypes a, d, and g, since both rat and rabbit antiserums directed to serotype a or g GTF inhibited GTF of serotypes d and g similarly and both antiserums also inhibited serotype a GTF. Furthermore, serum inhibition patterns indicated that GTF of serotypes c and e, and possibly b, are antigenically related to each other, but are antigenically distinct from GTF of serotype a, d, or g. Serum antibody directed to antigens other than enzyme (e.g., serotype-specific antigen or teichoic acid) had little effect on the inhibition assay. Salivas from rats immunized with cell-assocd. or supernatant-derived GTF exhibited low but consistent inhibition of GTF activity, which generally corresponded to the serum patterns. The serums of 2 groups of hansters immunized with GTF (serotype g), enriched either in water-insol. or water-sol. glucan synthetic activity, gave patterns of inhibition quite similar to those seen with serums from more heterogeneous cell-assocd. or crude supernatant-derived GTF prepns. Both groups of hamster serums also gave virtually identical patterns, suggesting that the 2 enzyme forms used as antigen share common antigenic determinants. The results from the 3 animal models suggest that among the cariogenic organisms tested, 2 (serotypes a, d, g and b, c, e), or perhaps 3 (serotypes a, d, g; b; and c, e), different subsets of GTF exist that have distinct antigenic determinants within a subset.

=> e taubman martin a/au

E1	90	TAUBMAN MARK B/AU
E2	2	TAUBMAN MARTIN/AU
E3	73 -->	TAUBMAN MARTIN A/AU
E4	1	TAUBMAN MATTHEW/AU
E5	15	TAUBMAN MATTHEW S/AU
E6	4	TAUBMAN MICHELE/AU
E7	1	TAUBMAN N A/AU

E8 1 TAUBMAN NORA E/AU

E9 2 TAUBMAN O/AU

E10 10 TAUBMAN P/AU

E11 1 TAUBMAN P D/AU

E12 1 TAUBMAN R/AU

=> s e2-e3 and glucosyltransferase?

L3 37 ("TAUBMAN MARTIN"/AU OR "TAUBMAN MARTIN A"/AU) AND GLUCOSYLTRANS FERASE?

=> dup rem l3

PROCESSING COMPLETED FOR L3

L4 34 DUP REM L3 (3 DUPLICATES REMOVED)

=> d bib ab 1-

YOU HAVE REQUESTED DATA FROM 34 ANSWERS - CONTINUE? Y/(N):y

L4 ANSWER 1 OF 34 USPATFULL on STN

AN 2004:165910 USPATFULL

TI Immunogenicity of glucan binding protein

IN Smith, Daniel J., Natick, MA, UNITED STATES
Taubman, Martin A. , Newtonville, MA, UNITED STATES

PI US 2004127400 A1 20040701

AI US 2003-383930 A1 20030307 (10)

PRAI US 2002-402483P 20020808 (60)
US 2002-363209P 20020307 (60)

DT Utility

FS APPLICATION

LREP Ingrid A. Beattie, Ph.D., Mintz, Levin, Cohn, Ferris, Glovsky and Popeo,P.C., One Financial Center, Boston, MA, 02111

CLMN Number of Claims: 32

ECL Exemplary Claim: 1

DRWN 12 Drawing Page(s)

LN.CNT 3002

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Immunogenic compositions and subunit vaccines for dental caries are described which comprise peptide subunits of glucan binding protein-B and peptide subunits of glucan binding protein-B in combination with peptide subunits of ***glucosyltransferase*** . Methods of provoking an immune response to S. mutans glucan binding protein-B or ***glucosyltransferase*** . Methods of immunizing a mammal against dental caries are also described, along with antibodies which bind particular epitopes of glucan binding protein-B or ***glucosyltransferase*** .

L4 ANSWER 2 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:737524 CAPLUS

DN 139:259950

TI Streptococcal glucan binding protein-B and ***glucosyltransferase***

and fragments for inducing antibodies against dental caries

IN Smith, Daniel J.; ***Taubman, Martin A.***

PA The Forsyth Institute, USA

SO PCT Int. Appl., 49 pp.
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003075845	A2	20030918	WO 2003-US6962	20030307
US 2004127400	A1	20040701	US 2003-383930	20030307

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2002-363209P P 20020307
US 2002-402483P P 20020808

AB Immunogenic compns. and subunit vaccines for dental caries are described which comprise peptide subunits of glucan binding protein-B and peptide subunits of glucan binding protein-B in combination with peptide subunits of ***glucosyltransferase*** . Methods of provoking an immune response to S. mutans glucan binding protein-B or ***glucosyltransferase*** . Methods of immunizing a mammal against dental caries are also described, along with antibodies which bind particular epitopes of glucan binding protein-B or ***glucosyltransferase*** .

L4 ANSWER 3 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1

AN 2001:886776 CAPLUS

DN 136:36332

TI Synthetic peptide vaccines for dental caries

IN Smith, Daniel J.; ***Taubman, Martin A.***

PA USA

SO U.S. Pat. Appl. Publ., 17 pp., Cont.-in-part of U.S. 5,686,075.
CODEN: USXXCO

DT Patent

LA English

FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI US 2001048926 A1 20011206 US 1997-967573 19971110
US 5686075 A 19971111 US 1993-57162 19930430
EP 1266662 A2 20021218 EP 2002-17131 19930430
EP 1266662 A3 20030528
R: BE, CH, DE, DK, FR, GB, IT, LI, NL, SE, IE
PRAI US 1992-877295 B2 19920501
US 1993-57162 A2 19930430
EP 1993-910953 A3 19930430

AB Vaccine compns. and immunogenic compns. are described which are ***glucosyltransferase*** subunit vaccines for dental caries and which contain at least one peptide which corresponds to a sequence of ***glucosyltransferase*** contg. aspartate 413, aspartate 415 or both aspartate 413 and aspartate 415. These subunit vaccines elicit antibodies which protect an immunized mammal from dental caries. Methods of provoking an immune response to intact ***glucosyltransferase*** are also described.

L4 ANSWER 4 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:549186 CAPLUS
DN 135:255748
TI Facilitated intranasal induction of mucosal and systemic immunity to mutans streptococcal ***glucosyltransferase*** peptide vaccines
AU Smith, Daniel J.; King, William F.; Barnes, Leigh A.; Trantolo, Debra; Wise, Donald L.; ***Taubman, Martin A.***
CS Department of Immunology, The Forsyth Institute, Boston, MA, 02115, USA
SO Infection and Immunity (2001), 69(8), 4767-4773
CODEN: INFIBR; ISSN: 0019-9567
PB American Society for Microbiology
DT Journal
LA English

AB Synthetic peptide vaccines which are derived from functional domains of Streptococcus mutans ***glucosyltransferases*** (GTF) have been shown to induce protective immunity in Sprague-Dawley rats after s.c. injection in the salivary gland region. Since mucosal induction of salivary immunity would be preferable in humans, the authors explored methods to induce mucosal antibody in the rat to the GTF peptide vaccines HDS and HDS-GLU after intranasal administration. Several methods of facilitation of the immune response were studied: the incorporation of peptides in bioadhesive poly(D,L-lactide-coglycolide) (PLGA) microparticles, the use of monoepitopic (HDS) or diepitopic (HDS-GLU) peptide constructs, or the use of mucosal adjuvants. Salivary IgA responses were not detected after intranasal administration of diepitopic HDS-GLU peptide constructs in alum or after incorporation into PLGA microparticles. However, significant primary and secondary salivary IgA and serum IgG antibody responses to HDS were induced in all rats when cholera holotoxin (CT) or a detoxified mutant Escherichia coli heat-labile enterotoxin (R192G LT) were

intranasally administered with HDS peptide constructs in PLGA. Coadministration of LT with HDS resulted in predominantly IgG2a responses in the serum, while coadministration with CT resulted in significant IgG1 and IgG2a responses to HDS. Serum IgG antibody, which was induced to the HDS peptide construct by coadministration with these adjuvants, also bound intact mutans streptococcal GTF in an ELISA and inhibited its enzymic activity. Thus, immune responses which are potentially protective for dental caries can be induced to peptide-based GTF vaccines after mucosal administration if combined with the CT or LT R192G mucosal adjuvant.

RE.CNT 57 THERE ARE 57 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2001:473678 CAPLUS

DN 135:209564

TI Diepitopic construct of functionally and epitopically complementary peptides enhances immunogenicity, reactivity with ***glucosyltransferase*** , and protection from dental caries

AU ***Taubman, Martin A.*** ; Holmberg, Cynthia J.; Smith, Daniel J.

CS Department of Immunology, The Forsyth Institute, Boston, MA, 02115, USA

SO Infection and Immunity (2001), 69(7), 4210-4216
CODEN: INFIBR; ISSN: 0019-9567

PB American Society for Microbiology

DT Journal

LA English

AB Coimmunization with peptide constructs from catalytic (CAT) and glucan-binding (GLU) domains of ***glucosyltransferase*** (GTF) of mutans streptococci has resulted in enhanced levels of antibody to the CAT construct and to GTF. The authors designed and synthesized a diepitopic construct (CAT-GLU) contg. two copies of both CAT (B epitope only) and GLU (B and T epitope) peptides. The immunogenicity of this diepitopic construct was compared with that of individual CAT and GLU constructs by immunizing groups of Sprague-Dawley rats s.c. in the salivary gland vicinity with the CAT-GLU, CAT, or GLU construct or by treating rats by sham immunization. Levels of serum IgG antibody to GTF or CAT in the CAT-GLU group were significantly greater than in GLU- or CAT-immunized groups. Immunization with CAT-GLU was compared to coimmunization with a mixt. of CAT and GLU in a second rodent expt. under a similar protocol. CAT-GLU immunization resulted in serum IgG and salivary IgA responses to GTF and CAT which were greater than after coimmunization. Immunization with the diepitopic construct and communization with CAT and GLU constructs showed proliferation of T lymphocytes to GTF. Immunization with either the CAT or GLU construct has been shown to elicit significant protection in a rodent dental caries model. Similarly in this study, the enhanced response to GTF after immunization with the CAT-GLU construct resulted in protective effects on dental caries. Therefore, the CAT-GLU

diepitopic construct can be a potentially important antigen for a caries vaccine, giving rise to greater immune response than after immunization with CAT, GLU, or a mixt. of the two.

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:282559 CAPLUS

DN 133:41850

TI Coimmunization with complementary ***glucosyltransferase*** peptides results in enhanced immunogenicity and protection against dental caries

AU ***Taubman, Martin A.*** ; Smith, Daniel J.; Holmberg, Cynthia J.; Eastcott, Jean W.

CS Department of Immunology, The Forsyth Institute, Boston, MA, 02115, USA

SO Infection and Immunity (2000), 68(5), 2698-2703
CODEN: INFIBR; ISSN: 0019-9567

PB American Society for Microbiology

DT Journal

LA English

AB Peptide constructs from the catalytic (CAT) and glucan-binding (GLU) regions of the mutans streptococcal ***glucosyltransferase*** enzymes (GTF) can provide immunity to dental caries infection. A strategy of coimmunization was tested to det. whether protection could be enhanced. Rats were immunized with one of the previously described peptide constructs from the CAT or GLU region of the GTF of mutans streptococci or coimmunized with a combination of these constructs (CAT-GLU). Coimmunized animals demonstrated significantly higher serum IgG and salivary IgA antibody levels to CAT or GTF than rats immunized with either construct alone. To assess the functional significance of coimmunization with these constructs, animals were immunized as above or with Streptococcus sobrinus GTF and then infected with S. sobrinus to explore the effects of immunization on immunol., microbiol., and disease (dental caries) parameters. Serum antibody from the communized group inhibited S. sobrinus GTF-mediated insol. glucan synthesis in vitro above that of the individual-construct-immunized groups. Immunization with CAT or GLU constructs resulted in significantly reduced dental caries after infection with S. sobrinus compared with sham-immunized animals. Coimmunization produced greater redns. in caries than after immunization with either CAT or GLU. Also, significant elevations in lymphocyte proliferative responses to CAT, GLU, and GTF were obsd. after coimmunization with CAT-GLU compared with the responses after immunization with the individual constructs. The results suggested that increased nos. of memory T cells, which could proliferate to CAT, were generated by coimmunization. The expts. support the functional significance of these GTF domains in dental caries pathogenesis and present coimmunization as a simple alternative to intact GTF to enhance protective immunity against cariogenic

microorganisms.

RE.CNT 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:672601 CAPLUS
DN 131:298658
TI Conjugate vaccines for the prevention of dental caries
IN Lees, Andrew; ***Taubman, Martin A.*** ; Smith, Daniel J.
PA USA
SO PCT Int. Appl., 54 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9952548	A2	19991021	WO 1999-US7828	19990409
WO 9952548	A3	19991202		
W: AU, CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2325338	AA	19991021	CA 1999-2325338	19990409
AU 9934864	A1	19991101	AU 1999-34864	19990409
AU 761927	B2	20030612		
EP 1069909	A2	20010124	EP 1999-916570	19990409
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002511422	T2	20020416	JP 2000-543158	19990409

PRAI US 1998-81315P P 19980410
WO 1999-US7828 W 19990409

AB The present invention provides glucan-based compns. and methods for stimulating an immune response against mutans Streptococci components and vaccines and methods for the treatment and prevention of dental caries. In a preferred embodiment, a glucan polymer is covalently bound to one or more T cell-dependent antigens to form a conjugate vaccine. The T cell-dependent antigen preferably contains epitopes of one or more mutans streptococcal proteins, such as a ***glucosyltransferase*** . Moreover, one or more moieties, including haptens, may be conjugated to the glucan or to the glucan-T cell-dependent compn. In a preferred embodiment, these moieties are peptides which contain immunogenic epitopes corresponding to components of a mutants streptococcus.

L4 ANSWER 8 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:291237 CAPLUS
DN 131:84814

TI Antibody to ***glucosyltransferase*** induced by synthetic peptides associated with catalytic regions of .alpha.-amylases

AU Smith, Daniel J.; Heschel, Rhonda L.; King, William F.; ***Taubman,*** *** Martin A.***

CS Department of Immunology, Forsyth Dental Center, Boston, MA, 02115, USA

SO Infection and Immunity (1999), 67(5), 2638-2642
CODEN: INFIBR; ISSN: 0019-9567

PB American Society for Microbiology

DT Journal

LA English

AB We examd. the immunogenicity and induction of inhibitory activity of 19-mer synthetic peptides which contained putative catalytic regions that were assocd. with the .beta.5 (EAW) and .beta.7 (HDS) strand elements of the suggested (.beta.,.alpha.)8 catalytic barrel domain of Streptococcus mutans ***glucosyltransferase*** (GTF). Both peptides readily induced serum IgG (IgG) and salivary IgA antipeptide activity which was reactive both with the inciting peptide and with intact S. mutans GTF. Antisera to each peptide construct also inhibited the ability of S. mutans GTF to synthesize glucan. These observations support the existence of catalytic subdomains contg. glutamate and tryptophan (EAW) or aspartate and histidine (HDS) residues, each of which have been suggested to be involved with the catalytic activity of GTF. Furthermore, the epitopes defined in these sequences have significant immunogenicity and can induce immune responses which interfere with GTF-mediated glucan synthesis.

RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 9 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1998:711576 CAPLUS

DN 130:78492

TI Structural and antigenic characteristics of Streptococcus sobrinus glucan binding proteins

AU Smith, Daniel J.; King, William E.; Wu, Christine D.; Shen, Bella I.; ***Taubman, Martin A.***

CS Department of Immunology, Forsyth Dental Center, Boston, MA, 02115, USA

SO Infection and Immunity (1998), 66(11), 5565-5569
CODEN: INFIBR; ISSN: 0019-9567

PB American Society for Microbiology

DT Journal

LA English

AB Three purified glucan binding proteins (GBP-2, GBP-3, and GBP-5) from Streptococcus sobrinus 6715 were compared structurally by mass spectroscopy of tryptic fragments and antigenically by Western blot anal. with rat antisera to each GBP or to peptides contg. putative glucan binding epitopes of mutans streptococcal ***glucosyltransferases*** . Structural and antigenic analyses indicated that GBP-3 and GBP-5 are very

similar but that both are essentially unrelated to GBP-2. None of these S. sobrinus GBPs appeared to have a strong antigenic relationship with GBPs from Streptococcus mutans. Thus, S. sobrinus GBP-2 and GBP-3 appear to be distinct proteins with potentially different functions. S. sobrinus GBP-5 may be a proteolytic fragment of GBP-3, or, alternatively, the genes coding for these proteins may be closely related.

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 10 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2

AN 1997:735840 CAPLUS

DN 128:21853

TI Synthetic peptide vaccines for dental caries

IN ***Taubman, Martin A.*** ; Smith, Daniel J.

PA Forsyth Dental Infirmary for Children, USA

SO U.S., 11 pp., Cont.-in-part of U.S. Ser. No. 877,295, abandoned.
CODEN: USXXAM

DT Patent

LA English

FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5686075	A	19971111	US 1993-57162	19930430
EP 1266662	A2	20021218	EP 2002-17131	19930430
EP 1266662	A3	20030528		
R: BE, CH, DE, DK, FR, GB, IT, LI, NL, SE, IE				
US 2001048926	A1	20011206	US 1997-967573	19971110
PRAI US 1992-877295	B2	19920501		
EP 1993-910953	A3	19930430		
US 1993-57162	A2	19930430		

AB Immunization of animals with a compn. contg. either an amino acid sequence from the catalytic domain of ***glucosyltransferase*** , an amino acid sequence from the glucan-binding region of ***glucosyltransferase*** or an amino acid sequence from the native surface domain of ***glucosyltransferase*** provoke antibody and T-cell immune responses to this enzyme. Since this enzyme has been implicated in the colonization of mutans streptococci on tooth surfaces, such immune responses are important for the prevention of dental caries. Multicomponent and multivalent compns. which include these amino acid sequences provide effective vaccine capabilities.

L4 ANSWER 11 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1997:730327 CAPLUS

DN 128:33475

TI Immunogenicity and protective immunity induced by synthetic peptides associated with a catalytic subdomain of mutans group streptococcal

glucosyltransferase

AU Smith, Daniel J.; Shoushtari, Babak; Heschel, Rhonda L.; King, William F.; ***Taubman, Martin A.***

CS Dep. Immunology, Forsyth Dental Center, Boston, MA, 02115, USA

SO Infection and Immunity (1997), 65(11), 4424-4430
CODEN: INFIBR; ISSN: 0019-9567

PB American Society for Microbiology

DT Journal

LA English

AB We examd. the immunogenicity and induction of protective immunity of two 19-mer sequences (GGY and AND) which overlapped a highly conserved region which has recently been implicated in the enzymic activity of ***glucosyltransferases*** (GTFs) of the mutans group streptococci. These peptides were synthesized as eight-branched constructs on a lysine core. Serum IgG antibody, induced by s.c. (salivary gland vicinity) injection with these peptide constructs, reacted with the inciting antigen, with mutans streptococcal GTFs, and with a 21-mer peptide (CAT) contg. an aspartate previously shown to covalently bind sucrose. Several of these antisera also inhibited the ability of Streptococcus sobrinus GTF to synthesize insol. glucan. Significant levels of salivary IgA antibody were also induced by GGY and AND peptide constructs after s.c. injection. The effect of immunization with the GGY and AND peptide constructs on the cariogenicity of Streptococcus mutans was studied in three expts. by immunization of weanling Sprague-Dawley rats, twice at 7- to 14-day intervals with peptides, S. sobrinus GTF, or phosphate-buffered saline. All rats were then orally infected with S. mutans SJ. After 63-day infection periods, the GGY and AND-injected groups had significant dental caries redns. compared with sham-injected groups in most expts. These studies support the existence of an addnl. catalytic subdomain within the sequence defined by the GGY and AND peptides. Furthermore, the epitopes defined in these sequences have significant immunogenicity, can induce immune responses which interfere with GTF-mediated glucan synthesis in vitro, and can protect rats from exptl. dental caries.

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 12 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1996:455159 CAPLUS

DN 125:112292

TI Experimental immunization of rats with a Streptococcus mutans 59-kilodalton glucan-binding protein protects against dental caries

AU Smith, Daniel J.; ***Taubman, Martin A.***

CS Dep. Immunol., Forsyth Dental Cent., Boston, MA, 02115, USA

SO Infection and Immunity (1996), 64(8), 3069-3073
CODEN: INFIBR; ISSN: 0019-9567

PB American Society for Microbiology

DT Journal

LA English

AB Glucan-binding proteins (GBPs) are theor. important in the mol. pathogenesis of dental caries caused by Streptococcus mutans. The present study evaluated the ability of antibody induced by the S. mutans 59-kDa GBP (GBP59) to affect dental caries caused by exptl. infection with S. mutans in a rodent model. Groups of 20-day-old rats were injected twice at 9-day intervals s.c. in the salivary gland vicinity with GBP59, ***glucosyltransferase*** (GTF), or phosphate-buffered saline (sham injection), each incorporated in an adjuvant. Two weeks after the second injection, GBP59- and GTF-injected rats contained significant levels of salivary IgA and serum IgG antibody to the resp. injected antigens. However, cross-reacting antibody to S. mutans GTF or GBP59 was not induced by the resp. antigen. Rats were then orally infected with S. mutans. After 71 days of infection, GBP59- and GTF-injected groups had smaller nos. of S. mutans on their molar surfaces, compared with the sham-injected infected group. Total, sulcal, and smooth-surface molar caries in the GBP59- and GTF-immunized S. mutans-infected groups were each significantly lower (P .ltoreq. 0.003) than the resp. measures of caries in the sham injected infected group. The results of this investigation demonstrate that immunization with S. mutans GBP59 induces an immune response in rats that can interfere with the accumulation of S. mutans and can reduce the level of dental caries caused by this cariogenic streptococcus. Furthermore, the protective immunity induced by either GBP59 or GTF appears to result from antibodies to independent epitopes since these two S. mutans components do not have a close antigenic relationship.

L4 ANSWER 13 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1995:718968 CAPLUS

DN 123:141125

TI Immunization of rats with synthetic peptide constructs from the glucan-binding or catalytic region of mutans streptococcal glycosyltransferase protects against dental caries

AU ***Taubman, Martin A.*** ; Holmberg, Cynthia J.; Smith, Daniel J.

CS Dep. Immunol., Forsyth Dental Cent., Boston, MA, 02115, USA

SO Infection and Immunity (1995), 63(8), 3088-93
CODEN: INFIBR; ISSN: 0019-9567

PB American Society for Microbiology

DT Journal

LA English

AB Previously, peptide constructs were described from 2 regions of ***glucosyltransferase*** (GTF) of mutans streptococci. A putative catalytic site in the amino-terminal half of the mol. and a repeated glucan-binding site in the carboxyl-terminal half of GTF were the regions upon which sequences were based. The present study explored the effects of immunization with these peptide constructs (called CAT or GLU) and with

streptococcal GTFs from Streptococcus sobrinus and S. mutans on immunol., microbiol., and disease parameters. Groups of immunized Sprague-Dawley rats were infected with either 108 S. sobrinus 6715 or 108 S. mutans SJ32 organisms. Serum IgG antibody levels, detd. by ELISA, to the resp. peptide constructs and to the appropriate streptococcal GTF were significantly increased (after immunization) prior to infection and at the end of the expt. Also, serum antibody from CAT-, GLU-, and S. sobrinus GTF-immunized rats inhibited S. sobrinus GTF-mediated insol. glucan synthesis (all) and S. mutans GTG-mediated sol. glucan synthesis (all except anti-GLU) from sucrose. Immunization with the CAT or GLU peptide construct resulted in significantly reduced smooth surface and sulcal caries after infection with S. sobrinus. Sulcal dental caries after infection with S. mutans SJ32 was also significantly reduced in CAT- and GLU-immunized rats. Thus, immunization with peptides whose sequences are based on putative functional domains of mutans streptococcal GTF are protective toward a cariogenic S. sobrinus or S. mutans infection.

L4 ANSWER 14 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1995:970032 CAPLUS
DN 124:84183
TI Potential for ***glucosyltransferase*** -based synthetic peptides in a dental caries vaccine
AU Smith, Daniel J.; ***Taubman, Martin A.***
CS Department of Immunology, Forsyth Dental Center, Boston, MA, 02115, USA
SO Advances in Experimental Medicine and Biology (1995), 371B, 1157-9
CODEN: AEMBAP; ISSN: 0065-2598
DT Journal
LA English
AB The antigenicity and immunogenicity of MAP constructs contg. 4 copies of peptides derived from sequences assocd. with the glucan-binding or catalytic domains of ***glucosyltransferase*** were studied in humans and rats. Both constructs reacted with several human serum IgG and salivary IgA antibody samples, and were immunogenic in rats, giving rise to high levels of anti-peptide serum IgG. These results are discussed in the context of developing a vaccine for dental caries.

L4 ANSWER 15 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1995:970029 CAPLUS
DN 124:53208
TI Development of salivary IgA antibody to oral streptococcal antigens associated with virulence
AU Smith, Daniel J.; ***Taubman, Martin A.***
CS Department of Immunology, Forsyth Dental Center, Boston, MA, 02115, USA
SO Advances in Experimental Medicine and Biology (1995), 371B, 1141-3
CODEN: AEMBAP; ISSN: 0065-2598
DT Journal

LA English

AB The authors studied the relationship between the initial infection with Streptococcus mutans and the appearance of the salivary antibody to streptococcal antigens that may be involved in colonization (***glucosyltransferase*** , glucan-binding protein, and antigen I/II).

L4 ANSWER 16 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1995:230260 CAPLUS

DN 122:29544

TI Immunological characteristics of a synthetic peptide associated with a catalytic domain of mutans streptococcal ***glucosyltransferase***

AU Smith, Daniel J.; ***Taubman, Martin A.*** ; King, William F.; Eida, Stephen; Powell, Jonathan R.; Eastcott, Jean

CS Dep. Immunol., Forsyth Dental Center, Boston, MA, 02115, USA

SO Infection and Immunity (1994), 62(12), 5470-6
CODEN: INFIBR; ISSN: 0019-9567

PB American Society for Microbiology

DT Journal

LA English

AB The immunogenicity of a multiple antigenic peptide construct consisting of four copies of the synthetic 21-mer peptide DANFDSIRVDAVDNVDADLLQ was measured. The compn. of this peptide was derived from a sequence in the N-terminal region of mutans streptococcal ***glucosyltransferases*** (GTFs) contg. an aspartic acid implicated in catalysis. The peptide (CAT) construct was synthesized as a tetramer on a lysine backbone and s.c. injected into Sprague-Dawley rats for polyclonal antibody formation or i.p. injected into BALB/c mice, and then spleen cell fused with Sp2/0Ag14 murine myeloma cells for monoclonal antibody formation. The resulting rat antisera and mouse monoclonal antibodies reacted with CAT and with native GTF isoenzymes from Streptococcus sobrinus and Streptococcus mutans (in ELISA and Western blot [immunoblot] analyses). Functional inhibition of the water-insol. glucan synthetic activity of S. sobrinus GTF-I was demonstrated with an IgM anti-CAT monoclonal antibody (>80% inhibited) and with rat sera (approx. 17% inhibited). The monoclonal antibody prepn. also modestly inhibited the water-sol. glucan synthetic activity of an S. mutans GTF mixt. These results suggest that the CAT peptide contains B-cell epitopes that are similar to those of intact mutans streptococcal GTFs and has the potential to elicit antibody that can inhibit GTF function. Thus, sequences within this peptide construct may have value for inclusion in a synthetic dental caries vaccine.

L4 ANSWER 17 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1994:86402 CAPLUS

DN 120:86402

TI Synthetic peptide vaccines for dental caries

IN ***Taubman, Martin A.*** ; Smith, Daniel J.

PA Forsyth Dental Infirmary for Children, USA

SO PCT Int. Appl., 37 pp.
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9322341	A1	19931111	WO 1993-US4094	19930430
W: CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 638092	A1	19950215	EP 1993-910953	19930430
EP 638092	B1	20021204		
R: BE, CH, DE, DK, FR, GB, IE, IT, LI, NL, SE				
JP 07506374	T2	19950713	JP 1993-519549	19930430
EP 1266662	A2	20021218	EP 2002-17131	19930430
EP 1266662	A3	20030528		
R: BE, CH, DE, DK, FR, GB, IT, LI, NL, SE, IE				
PRAI US 1992-877295	A	19920501		
EP 1993-910953	A3	19930430		
WO 1993-US4094	W	19930430		

AB Immunization of animals with a compn. contg. either an amino acid sequence from the catalytic domain, glucan-binding region, and native surface domain of ***glucosyltransferase*** (I) provoke antibody and T-cell immune responses to this enzyme. Since this enzyme has been implicated in the colonization of mutans streptococci on tooth surfaces, such immune responses are important for the prevention of dental caries. Sequences of synthetic I-derived peptides are included. The immunogenicity of the synthetic peptides was detd. in rats, as was reactivity of T and B lymphocytes to I in human.

L4 ANSWER 18 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1993:578862 CAPLUS

DN 119:178862

TI Antigenicity and immunogenicity of a synthetic peptide derived from a glucan-binding domain of mutans streptococcal ***glucosyltransferase***

AU Smith, Daniel J.; ***Taubman, Martin A.*** ; Holmberg, Cynthia F.; Eastcott, Jean; King, William F.; Ali-Salaam, Pia

CS Dep. Immunol., Forsyth Dent. Cent., Boston, MA, 02115, USA

SO Infection and Immunity (1993), 61(7), 2899-905
CODEN: INFIBR; ISSN: 0019-9567

DT Journal

LA English

AB The immunogenicity and antigenicity of a multiply antigenic peptide construct contg. four copies of the synthetic peptide TGAQTIKGQKLYFKANGQQVKG were measured in rodents and humans, resp. The

compn. of this peptide construct (termed GLU) was derived from a major repeating sequence in the C-terminal region of mutans streptococcal ***glucosyltransferases*** that synthesize water-insol. glucan (GTF-I). The GLU peptide elicited high levels of serum IgG antibody to GLU after s.c. injection into Sprague-Dawley rats. These antisera also reacted with intact GTF isoenzymes from Streptococcus sobrinus and Streptococcus mutans (by ELISA and Western blot [immunoblot] analyses) and with an 87-kDa glucan-binding protein from S. sobrinus (by Western blot). The synthesis of filter-retained glucan by GTF-Sd of S. sobrinus could be inhibited (30%) by preincubation with anti-GLU rat serum. Splenic and lymph node lymphocytes from rats injected once with S. sobrinus GTF isoenzymes demonstrated proliferation after 5 days of culture with GLU. The GLU peptide reacted with 4 of 29 human parotid saliva samples and 5 of 29 human serum samples (by ELISA). These results suggest that the GLU peptide contains B- and T-cell epitopes that are similar to those of intact mutans streptococcal GTFs and possibly certain other glucan-binding proteins as well. Since antibody to this epitope(s) appears to inhibit GTF function, sequences within this peptide construct may have value for inclusion in a synthetic dental caries vaccine.

L4 ANSWER 19 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1986:495855 CAPLUS

DN 105:95855

TI Caries immunity and immune responses to Streptococcus mutans ***glucosyltransferase***

AU ***Taubman, Martin A.*** ; Smith, Daniel J.; Ebersole, Jeffrey L.; Stack, Wendy E.; Tsukuda, Tomio; Trocme, Marie C.

CS Dep. Immunol., Forsyth Dent. Cent., Boston, MA, 02115, USA

SO Mol. Microbiol. Immunobiol. Streptococcus Mutans, Proc. Int. Conf. "Cell., Mol. Clin. Aspects Streptococcus Mutans" (1986), Meeting Date 1985, 279-86. Editor(s): Hamada, Shigeyuki. Publisher: Elsevier, Amsterdam, Neth.
CODEN: 55CZAF

DT Conference

LA English

AB Extirpation of Peyer's patches and/or mesenteric lymph nodes dramatically decreased the serum IgA response to S. mutans ***glucosyltransferase*** (GTF) in rats. Also, neonatally thymectomized or congenitally athymic rats produced little or no salivary antibody response to GTF. Athymic animals were more susceptible to dental caries than normal controls; however, immunization with anti-GTF antibodies reduced susceptibility to caries in both groups.

L4 ANSWER 20 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1984:435199 CAPLUS

DN 101:35199

TI ***Glucosyltransferase***

IN ***Taubman, Martin A.*** ; Smith, Daniel J.

PA Forsyth Dental Infirmary for Children, USA

SO PCT Int. Appl., 12 pp.
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 8401170	A1	19840329	WO 1983-US1359	19830909
W: JP, US				
RW: AT, BE, CH, DE, FR, GB, LU, NL, SE				
US 4438200	A	19840320	US 1982-416869	19820913
CA 1183477	A1	19850305	CA 1983-420426	19830128
EP 118547	A1	19840919	EP 1983-903053	19830909
EP 118547	B1	19910116		
R: AT, BE, CH, DE, FR, GB, LI, NL, SE				
JP 59501696	T2	19841011	JP 1983-503130	19830909
JP 04040989	B4	19920706		
AT 60086	E	19910215	AT 1983-903053	19830909

PRAI US 1982-416869 19820913
EP 1983-903053 19830909
WO 1983-US1359 19830909

AB ***Glucosyltransferase*** (I) useful for immunization against dental caries is prepd. by culturing Streptococcus mutans in a medium contg. glucose and dialyzable nutrients and recovering I from the supernatant of the cultured cells by using a H2O-insol. polyglucan matrix. I is concd. and purified by Sepharose CL-4B gel filtration using 6M guanidine-HCl for elution. Thus, I is prepd. from the supernatant of S. mutans cultures by admixing the supernatant with H2O-insol. Sephadex beads prepd. by crosslinking dextrans of Leuconostoc mesenteroides with epichlorohydrin. After recovery and washing, the I-Sephadex bead complex is treated with a denaturing solvent (6M guanidine-HCl for 2 h at 37.degree.) to disrupt the complex and provide a I-denaturing solvent mixt.

L4 ANSWER 21 OF 34 USPATFULL on STN

AN 84:15901 USPATFULL

TI Method for the preparation of glucosyltranferase

IN ***Taubman, Martin A.*** , Newton, MA, United States
Smith, Daniel J., Natick, MA, United States

PA Forsyth Dental Infirmary for Children, Boston, MA, United States (U.S. corporation)

PI US 4438200 19840320

AI US 1982-416869 19820913 (6)

DT Utility

FS Granted

EXNAM Primary Examiner: Shapiro, Lionel M.

LREP Crowley, Richard P.

CLMN Number of Claims: 14

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 284

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method of preparing a purified ***glucosyltransferase*** (GTF) for use in immunization against dental caries, which method comprises: culturing a Streptococcus mutans in a medium containing glucose and dialyzable nutrients to form a mixture of culture cells and supernatant; recovering the supernatant by the removal of the culture cells; admixing the recovered supernatant with a water-insoluble, polymerized polysaccharide as solid particulate material for a period of time, to provide a GTF, solid particulate complex; recovering the GTF complex in solid particulate form by filtration; washing the solid GTF complex to remove unbound GTF and medium components; removing GTF from the solid particulate material by a denaturing solvent; recovering the water-insoluble particulate material for reuse in the method; and recovering the GTF from the water-insoluble polysaccharide and purifying the recovered GTF.

L4 ANSWER 22 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1984:470647 CAPLUS

DN 101:70647

TI Protective aspects of immune response to ***glucosyltransferase*** in relation to dental caries

AU ***Taubman, Martin A.*** ; Smith, Daniel J.; Ebersole, Jeffrey L.; Hillman, Jeffrey D.

CS Dep. Immunol., Forsyth. Dent. Cent., Boston, MA, 02115, USA

SO Glucosyltransferases, Glucans, Sucrose Dent. Caries, [Workshop] (1983), Meeting Date 1982, 249-58. Editor(s): Doyle, R. J.; Ciardi, J. E. Publisher: IRL, Washington, D. C.
CODEN: 51ZJAK

DT Conference

LA English

AB Antibody to ***glucosyltransferase*** (GTF) can interfere with Streptococcus mutans accumulation in dental plaques both in vitro and in vivo. The redns. in caries subsequent to the interference with accumulation can be correlated with salivary IgA antibody. The redns. in caries or lesions extend beyond serotype boundaries. Studies of antibody to GTF in vitro provided extensive evidence demonstrating the mode of this antibody function in vivo. Antibody to S. mutans enhanced the permeability of plaque such that either diffusion of acid away from the surface and/or diffusion of buffer ions toward the surface was

facilitated. Further studies with antibody to GTF-I indicated the water-insol. polyglucans (WIP) synthesized by GTF were preferentially inhibited and that water-sol.-polyglucans were not inhibited. Thus, immunol. interference with dental caries caused by S. mutans can now be explained on the mol. level. Antibody to GTF interferes with bacterial accumulation, and preferentially inhibits WIP synthesis. This inhibition results in a more porous plaque. Thus, the reduced levels of caries seen in immunized rodents could be the result of fewer bacteria secreting acid in a more porous plaque.

L4 ANSWER 23 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1984:470646 CAPLUS
DN 101:70646
TI Adjuvants, glucosytransferase and caries vaccine
AU Ebersole, Jeffrey L.; ***Taubman, Martin A.*** ; Smith, Daniel J.
CS Dep. Immunol., Forsyth Dent. Cent., Boston, MA, 02115, USA
SO Glucosyltransferases, Glucans, Sucrose Dent. Caries, [Workshop] (1983), Meeting Date 1982, 241-8. Editor(s): Doyle, R. J.; Ciardi, J. E. Publisher: IRL, Washington, D. C.
CODEN: 51ZJAK
DT Conference
LA English
AB Regulation of salivary IgA (SIgA) responses to ***glucosyltransferase*** (GTF) from Streptococcus mutans was examd. in the rat. T-cell depletion of rat via neonatal thymectomy (Tx) resulted in a lack of ability to respond to GTF in soln. with SIgA antibodies. Likewise, the Tx rats exhibited a significantly decreased response to GTF when presented on the surface of S. mutans. Further studies indicated that particulate GTF antigen bound to its product (water-insol. polysaccharide) was more efficient at eliciting SIgA antibodies than sol. antigen. Studies of the effect of adjuvants on the SIgA antibody response showed that Al(OH)3, complete Freund's adjuvant, and muramyl dipeptide enhanced SIgA antibody prodn. when injected locally or administered intragastrically.

L4 ANSWER 24 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1984:470645 CAPLUS
DN 101:70645
TI Antigenic relatedness of ***glucosyltransferases*** from Streptococcus mutans and Streptococcus sanguis
AU Smith, Daniel J.; ***Taubman, Martin A.*** ; Ebersole, Jeffrey L.
CS Dep. Immunol., Forsyth Dent. Cent., Boston, MA, 02115, USA
SO Glucosyltransferases, Glucans, Sucrose Dent. Caries, [Workshop] (1983), Meeting Date 1982, 223-30. Editor(s): Doyle, R. J.; Ciardi, J. E. Publisher: IRL, Washington, D. C.
CODEN: 51ZJAK
DT Conference

LA English

AB The antigenic relationships among ***glucosyltransferases*** (GTF) from S. mutans were investigated using techniques measuring the binding of antibody to radiolabeled GTF or to GTF attached to polystyrene, or measuring the ability of antibody to inhibit GTF activity. IgG antibody to GTF from serotype c or g strains of S. mutans could bind to or inhibit the activity of GTF from homologous serotypes. However, IgG antibody to GTF from the g serotype reacted more strongly with GTF from serotypes a, d, and g than from serotypes c and e. Conversely, IgG antibody to GTF from the c serotype reacted best with GTF from serotypes c and e. Measurement of antibody activity in saliva generally revealed the same relationships. However, broad cross-protection was obsd. when these relationships were explored in vivo. The in vitro binding of IgG antibody to S. mutans GTF was low but significant for GTF from S. sanguis strains 10558, H7PR3, and 34. IN vivo, significantly fewer rodents immunized with S. mutans GTF and subsequently challenged with S. sanguis H7PR3 remained infected compared with sham-immunized and challenged control groups. However, immunization with GTF from S. sanguis 34 did not influence the course of infection or disease after infection with cariogenic S. mutans.

L4 ANSWER 25 OF 34 USPATFULL on STN

AN 81:8080 USPATFULL

TI Method of preparing a purified ***glucosyltransferase***

IN ***Taubman, Martin A.*** , Newton, MA, United States
Smith, Daniel J., Natick, MA, United States

PA Forsyth Dental Infirmary for Children, Boston, MA, United States (U.S. corporation)

PI US 4250262 19810210

AI US 1979-103590 19791214 (6)

RLI Continuation of Ser. No. US 1978-956847, filed on 2 Nov 1978, now abandoned which is a division of Ser. No. US 1978-879432, filed on 21 Feb 1978, now patented, Pat. No. US 4150116, issued on 17 Apr 1979

DT Utility

FS Granted

EXNAM Primary Examiner: Shapiro, Lionel M.

LREP Crowley, Richard P.

CLMN Number of Claims: 13

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 1795

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Immunization of animals with preparations containing more purified forms of ***glucosyltransferase*** (GTF) results in the presence of antibody in saliva demonstrable by functional inhibitions of enzyme activity and binding of radioactive enzyme. Serum antibody was also present. Immunized groups of animals had lower mean caries scores than

comparably sham-immunized or nonimmunized control groups. Local immunization with GTF of serotype c or g of a Streptococcus mutans reduces the colonization, caries, and lesions caused by infection with S. mutans of serotype g (strain 6715) or c, or with serotype g or c, or with serotype a or g, respectively.

L4 ANSWER 26 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 3
AN 1979:454528 CAPLUS
DN 91:54528
TI Immunization against dental caries with ***glucosyltransferase*** antigens
IN ***Taubman, Martin A.*** ; Smith, Daniel J.
PA Forsyth Dental Infirmary for Children, USA
SO U.S., 18 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 4150116	A	19790417	US 1978-879432	19780221
CA 1152000	A1	19830816	CA 1979-322048	19790221
US 4250262	A	19810210	US 1979-103590	19791214

PRAI US 1978-879432 19780221
US 1978-956847 19781102

AB Immunization of animals with prepns. contg. bacterial ***glucosyltransferase*** resulted in the presence of antibody in saliva demonstrable by functional inhibition of enzyme activity and binding of radioactive enzyme. Serum antibody was also present. Immunized groups of animals had lower mean caries scores than comparably sham-immunized or nonimmunized control groups. Local immunization with ***glucosyltransferase*** of serotype c or g of a Streptococcus mutans reduced the colonization, caries, and lesions caused by infection with S. mutans of serotype g (strain 6715) or c, or with serotype g or c, or with serotype a or g, resp.

L4 ANSWER 27 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1979:163806 CAPLUS
DN 90:163806
TI Preparation of ***glucosyltransferase*** from Streptococcus mutans by elution from water-insoluble polysaccharide with a dissociating solvent
AU Smith, Daniel J.; ***Taubman, Martin A.*** ; Ebersole, Jeffrey L.
CS Dep. Immunol., Forsyth Dent. Cent., Boston, MA, USA
SO Infection and Immunity (1979), 23(2), 446-52
CODEN: INFIBR; ISSN: 0019-9567
DT Journal

LA English

AB ***Glucosyltransferase*** (I) was obtained by dissocn. from water-insol. polysaccharide in the presence of 6M guanidine-HCl. Water-insol. polysaccharide was synthesized by cell-free culture supernatants from S. mutans strain 6715. Gel filtration of I on a column of 8% agarose in phosphate buffer, followed by filtration on a column of 4% crosslinked agarose in 6M guanidine-HCl, gave a 23-fold enrichment of the enzyme. The enriched I prepn. contained 22% carbohydrate and eluted at a position corresponding to a mol. wt. of 422,000. Polyacrylamide gel electrophoresis revealed 2 regions which stained for protein, formed water-insol. polysaccharide in the presence of sucrose, and pptd. with antiserums directed to crude I prepns. The guanidine-eluted enzyme could be primed by 5 .times. 10-5 M dextran T10. High-mol.-wt. glucan and a possible glucan-binding protein were also obtained after the final gel filtration step in addn. to I.

L4 ANSWER 28 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1980:4595 CAPLUS

DN 92:4595

TI Effect of oral administration of ***glucosyltransferase*** antigens on experimental dental caries

AU Smith, Daniel J.; ***Taubman, Martin A.*** ; Ebersole, Jeffrey L.

CS Dep. Immunol., Forsyth Dent. Cent., Boston, MA, 02115, USA

SO Infection and Immunity (1979), 26(1), 82-9
CODEN: INFIBR; ISSN: 0019-9567

DT Journal

LA English

AB The effect of oral administration of sol. antigen prepns. contg. ***glucosyltransferase*** on dental caries in hamsters was studied. Immunization was accomplished by feeding ***glucosyltransferase*** for 21 - 27 consecutive days. This immunization regimen resulted in the formation of salivary antibody, which was detected by functional inhibition of enzymic activity and by a modified enzyme-linked immunosorbent assay. A serum response also occurred in 2 of the 3 expts. performed. After infection with cariogenic Streptocccus mutans strain 6715, ***glucosyltransferase*** -fed hamsters had significantly fewer S. mutans cells recoverable from molar surfaces on 6 of 9 occasions, compared with buffer-fed control groups. Hamsters orally immunized with ***glucosyltransferase*** also always had lower mean caries scores and mean nos. of lesions than comparably infected sham-immunized groups. Thus, significant protection from exptl. dental caries can be accomplished by oral administration of sol. antigen prepns. contg. ***glucosyltransferase*** .

L4 ANSWER 29 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1980:162036 CAPLUS

DN 92:162036

TI The effects of local immunization with streptococcus mutans enzymic antigens on experimentally induced dental caries in rats

AU ***Taubman, Martin A.*** ; Smith, Daniel J.; Ebersole, Jeffrey L.

CS Dep. Immunol., Forsyth Dent. Cent., Boston, MA, USA

SO Report (1978), NIDR/CR-79/05; Order No. PB-298912, 48 pp. Avail.: NTIS From: Gov. Rep. Announce. Index (U. S.) 1979, 79(24), 78

DT Report

LA English

AB Immunization of rats with ***glucosyltransferase*** (GTF) from strain 6715 (PF6,7 and 9) or strain Ingbritt (PF10) or with whole cells from strains HS6, 6715 and Ingbritt (PF8) resulted in inhibition of GTF and radioactive GTF binding prior to infection and at the termination of these expts. Some redns. in S. mutans recovered were obsd. The homologous aspects of these observations were confirmed in germfree (G4) and hamster (H7) models. A degree of cross-protection was obsd. among serotypes of mutans when either whole cells (H8) or crude GFT antigens (PF9 and 10) were used for injection. GTF enzymes were prepd. from S. mutans strains E49 (serotype a), Ingbritt (serotype c) and 6715 (serotype g) by guanidine-HCl elution from water-insol. polysaccharide. GTF from S. mutans 6715 contained a single protein component and glucan. Immunization of hamsters with GTF from S. mutans E49 resulted in redns. in dental caries caused by homologous (E49) and heterologous (6715) serotypes and also redns. in S. mutans organisms recovered (H8). Tx rats immunized with whole cells had fewer caries and lesions than sham-immunized Tx rats but more disease than normal rats immunized in the same fashion. Thus, tx rats have a compensatory IgM response.

L4 ANSWER 30 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1979:101788 CAPLUS

DN 90:101788

TI Antibody binding of ***glucosyltransferase*** enzyme preparations from homologous and heterologous serotypes of S. mutans

AU ***Taubman, Martin A.*** ; Smith, Daniel J.; Ebersole, Jeffery L.

CS Dep. Immunol., Forsyth Dent. Cent., Boston, MA, USA

SO Advances in Experimental Medicine and Biology (1978), 107(Secretory Immun. Infect.), 317-25
CODEN: AEMBAP; ISSN: 0065-2598

DT Journal

LA English

AB Rat salivary IgA and serum IgG antibodies to ***glucosyltransferase*** (GTF) from serotypes a, c, and g of Streptococcus mutans reacted with the serotypically unrelated (heterologous) GTF in enzyme- and radioimmunoassays. For example, the anti-serotype c GTF serum was .apprx.66% cross-reactive with serotype g. However, salivary anti-serotype g had no effect on serotype c GTF enzyme activity.

Immunization against dental caries is discussed.

L4 ANSWER 31 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1979:70442 CAPLUS
DN 90:70442
TI Cross-protective aspects of ***glucosyltransferase*** antigens in the hamster caries model
AU Smith, Daniel J.; ***Taubman, Martin A.*** ; Ebersole, Jeffrey L.
CS Dep. Immunol., Forsyth Dent. Cent., Boston, MA, USA
SO Advances in Experimental Medicine and Biology (1978), 107(Secretory Immun. Infect.), 271-9
CODEN: AEMBAP; ISSN: 0065-2598
DT Journal
LA English
AB ***Glucosyltransferases*** (GTF) from Streptococcus mutans serotypes a and g were closely related antigenically but were more distantly related to GTF of serotype c. Local immunization with GTF from serotype c reduced the colonization, caries, and lesions caused by infection with the homologous strain compared with sham-injected controls. Local immunization with GTF of serotype c reduced the colonization, caries, and lesions caused by infection with S. mutans serotype g (strain 6715).

L4 ANSWER 32 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1977:119154 CAPLUS
DN 86:119154
TI Effects of local immunization with ***glucosyltransferase*** fractions from Streptococcus mutans on dental caries in rats and hamsters
AU ***Taubman, Martin A.*** ; Smith, Daniel J.
CS Dep. Immunol., Forsyth Dent. Cent., Boston, MA, USA
SO Journal of Immunology (1977), 118(2), 710-20
CODEN: JOIMA3; ISSN: 0022-1767
DT Journal
LA English
AB The effect of local immunization with ***glucosyltransferase*** enzymes of S. mutans on dental caries in conventional rats, hamsters, and gnotobiotic rats was studied. Injection of these animals with crude or defined ***glucosyltransferase*** enzyme prepns. incorporated into complete Freund's adjuvant consistently produced antibody in saliva demonstrable by functional inhibition of enzymatic activity and binding of radioactive enzyme. Serum antibody was also present. The immunized group of animals always had lower mean caries scores than comparably sham-immunized or nonimmunized control groups. Hamsters immunized with a defined enzyme prepn., contg. no more than 3 antigenic components (2 of which were enzyme), also demonstrated significant redns. in mean caries scores. The nos. of lesions were also always lower in immunized animals. In some cases there were redns. in the nos. of S. mutans that could be

recovered from the teeth of immunized, infected animals. The redns. in dental caries and lesions were greater on smooth dental surfaces than on occlusal surfaces, which might be explained as interference with adherence phenomena demonstrated by S. mutans. It is proposed that antibody interference affects dental caries caused by this organism.

L4 ANSWER 33 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1977:87568 CAPLUS

DN 86:87568

TI Antigenic relatedness of ***glucosyltransferase*** enzymes from Streptococcus mutans

AU Smith, Daniel J.; ***Taubman, Martin A.***

CS Dep. Immunol., Forsyth Dent. Cent., Boston, MA, USA

SO Infection and Immunity (1977), 15(1), 91-103
CODEN: INFIBR; ISSN: 0019-9567

DT Journal

LA English

AB The antigenic relation of ***glucosyltransferases*** (GTF) produced by different serotypes of S. mutans was studied by using a functional inhibition assay. Rat, rabbit, or hamster immune fluids, directed to cell-assocd. or supernatant-derived GTF, were tested against (NH4)2SO4-pptd. culture supernatants contg. GTF from 7 strains of S. mutans representing 6 different serotypes. An antigenic relationship was shown to exist among GTF from serotypes a, d, and g, since both rat and rabbit antiserums directed to serotype a or g GTF inhibited GTF of serotypes d and g similarly and both antiserums also inhibited serotype a GTF. Furthermore, serum inhibition patterns indicated that GTF of serotypes c and e, and possibly b, are antigenically related to each other, but are antigenically distinct from GTF of serotype a, d, or g. Serum antibody directed to antigens other than enzyme (e.g., serotype-specific antigen or teichoic acid) had little effect on the inhibition assay. Salivas from rats immunized with cell-assocd. or supernatant-derived GTF exhibited low but consistent inhibition of GTF activity, which generally corresponded to the serum patterns. The serums of 2 groups of hansters immunized with GTF (serotype g), enriched either in water-insol. or water-sol. glucan synthetic activity, gave patterns of inhibition quite similar to those seen with serums from more heterogeneous cell-assocd. or crude supernatant-derived GTF prepns. Both groups of hamster serums also gave virtually identical patterns, suggesting that the 2 enzyme forms used as antigen share common antigenic determinants. The results from the 3 animal models suggest that among the cariogenic organisms tested, 2 (serotypes a, d, g and b, c, e), or perhaps 3 (serotypes a, d, g; b; and c, e), different subsets of GTF exist that have distinct antigenic determinants within a subset.

L4 ANSWER 34 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1975:71491 CAPLUS

DN 82:71491

TI Specificity of antibodies to Streptococcus mutans. Significance in inhibition of adherence

AU Genco, Robert J.; Evans, Richard T.; ***Taubman, Martin A.***

CS Sch. Dent., State Univ. New York, Buffalo, NY, USA

SO Advances in Experimental Medicine and Biology (1974), 45, 327-36
CODEN: AEMBAP; ISSN: 0065-2598

DT Journal

LA English

AB Antiserum to S. mutans may inhibit adherence of the cells to smooth surfaces. This did not depend on bacterial death. Inhibition of adherence correlated with inhibition of cell-assocd. polysaccharide synthesis and inhibition of ***glucosyltransferase*** (I) activity. There was extensive cross reactivity between S. mutans strains of the Bratthall groups a and d. These 2 strains share an antigen (the a-d antigenic determinant). The finding that adherence and I activity of strain SL 1, a group d organism, was not inhibited with antiserums to group a or d organism is considered esp. important, since this strain did not have the a-d antigenic determinant. Thus the a-d antigenic determinant may be important to adherence of S. mutans strains of group a and d. The in vivo significance of antibodies to cell surface antigens of S. mutans was examd. in rat expts. Immunized rats had salivary antibodies of the IgA class which inhibited the activity of homologous I enzymes. Thus the salivary IgA antibodies may interfere with S. mutans colonization of rat teeth by interfering with the synthesis of adherent dextrans.

=> s glucosyltransferase? and microparticle?

L5 55 GLUCOSYLTRANSFERASE? AND MICROPARTICLE?

=> dup rem l5

PROCESSING COMPLETED FOR L5

L6 44 DUP REM L5 (11 DUPLICATES REMOVED)

=> d bib ab 1-

YOU HAVE REQUESTED DATA FROM 44 ANSWERS - CONTINUE? Y/(N):y

L6 ANSWER 1 OF 44 USPATFULL on STN

AN 2004:239309 USPATFULL

TI Starch encapsulation

IN Keeling, Peter, Ames, IA, UNITED STATES
Guan, Hanping, Ames, IA, UNITED STATES

PI US 2004185114 A1 20040923

AI US 2003-628525 A1 20030728 (10)

RLI Continuation of Ser. No. US 2000-625406, filed on 25 Jul 2000, ABANDONED

Continuation of Ser. No. US 1997-941445, filed on 30 Sep 1997, GRANTED, Pat. No. US 6107060

PRAI US 1996-26855P 19960930 (60)

DT Utility

FS APPLICATION

LREP BASF CORPORATION, 26 DAVIS DRIVE, RESEARCH TRIANGLE PARK, NC, 27709

CLMN Number of Claims: 20

ECL Exemplary Claim: 1

DRWN 12 Drawing Page(s)

LN.CNT 4654

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Hybrid polypeptides are provided formed with encapsulating regions from genes that encode for anabolic proteins. More particularly, the present invention relates to recombinant nucleic acid molecules that code for genes which encapsulate an attached protein within a matrix; preferably, these genes encapsulate a desired ("payload") polypeptide within starch, and more specifically within the starch granule matrix. Expression vectors comprising these recombinant nucleic acid molecules, and hosts therefor, and more specifically the starch-bearing portions of such hosts, transformed with such vectors, are also provided. Preferably, grain containing a foreign protein encapsulated within the starch is provided, useful to produce mammalian, fish and avian food. The invention also encompasses methods of producing purified protein from starch and particularly from starch granules, and industrial uses of such protein.

L6 ANSWER 2 OF 44 USPATFULL on STN

AN 2004:184970 USPATFULL

TI Glycoconjugation methods and proteins/peptides produced by the methods

IN DeFrees, Shawn, North Wales, PA, UNITED STATES
Zopf, David, Wayne, PA, UNITED STATES
Bayer, Robert, San Diego, CA, UNITED STATES
Bowe, Caryn, Doylestown, PA, UNITED STATES
Hakes, David, Willow Grove, PA, UNITED STATES
Chen, Xi, Lansdale, PA, UNITED STATES

PA Neose Technologies, Inc. (U.S. corporation)

PI US 2004142856 A1 20040722

AI US 2003-410913 A1 20030409 (10)

RLI Continuation-in-part of Ser. No. US 2003-360779, filed on 19 Feb 2003, PENDING Continuation-in-part of Ser. No. US 2003-360770, filed on 6 Jan 2003, PENDING Continuation-in-part of Ser. No. US 2002-287994, filed on 5 Nov 2002, PENDING Continuation of Ser. No. WO 2002-US32263, filed on 9 Oct 2002, PENDING

PRAI US 2002-407527P 20020828 (60)
US 2002-407527P 20020828 (60)
US 2002-404249P 20020816 (60)

US 2002-396594P 20020717 (60)
US 2002-391777P 20020625 (60)
US 2002-387292P 20020607 (60)
US 2001-334301P 20011128 (60)
US 2001-334233P 20011128 (60)
US 2001-334692P 20011121 (60)
US 2001-328523P 20011010 (60)
DT Utility
FS APPLICATION
LREP MORGAN, LEWIS & BOCKIUS LLP, 1701 MARKET STREET, PHILADELPHIA, PA, 19103-2921
CLMN Number of Claims: 88
ECL Exemplary Claim: 1
DRWN 497 Drawing Page(s)
LN.CNT 16544
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention includes methods and compositions for remodeling a peptide molecule, including the addition or deletion of one or more glycosyl groups to a peptide, and/or the addition of a modifying group to a peptide.

L6 ANSWER 3 OF 44 USPATFULL on STN
AN 2004:178391 USPATFULL
TI Remodeling and glycoconjugation of peptides
IN DeFrees, Shawn, North Wales, PA, UNITED STATES
Zopf, David, Wayne, PA, UNITED STATES
Bayer, Robert, San Diego, CA, UNITED STATES
Bowe, Caryn, Doylestown, PA, UNITED STATES
Hakes, David, Willow Grove, PA, UNITED STATES
Chen, Xi, Lansdale, PA, UNITED STATES
PA Neose Technologies, Inc. (U.S. corporation)
PI US 2004137557 A1 20040715
AI US 2002-287994 A1 20021105 (10)
RLI Continuation of Ser. No. WO 2002-US32263, filed on 9 Oct 2002, PENDING
PRAI US 2002-407527P 20020828 (60)
US 2002-404249P 20020816 (60)
US 2002-396594P 20020717 (60)
US 2002-391777P 20020625 (60)
US 2002-387292P 20020607 (60)
US 2001-334301P 20011128 (60)
US 2001-334233P 20011128 (60)
DT Utility
FS APPLICATION
LREP MORGAN, LEWIS & BOCKIUS LLP, 1701 MARKET STREET, PHILADELPHIA, PA, 19103-2921
CLMN Number of Claims: 447

ECL Exemplary Claim: 1
DRWN 345 Drawing Page(s)
LN.CNT 16205
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention includes methods and compositions for remodeling a peptide molecule, including the addition or deletion of one or more glycosyl groups to a peptide, and/or the addition of a modifying group a peptide.

L6 ANSWER 4 OF 44 USPATFULL on STN
AN 2004:172476 USPATFULL
TI Glycopegylation methods and proteins/peptides produced by the methods
IN DeFrees, Shawn, North Wales, PA, UNITED STATES
Zopf, David, Wayne, PA, UNITED STATES
Bayer, Robert, San Diego, CA, UNITED STATES
Bowe, Caryn, Doylestown, PA, UNITED STATES
Hakes, David, Willow Grove, PA, UNITED STATES
Chen, Xi, Lansdale, PA, UNITED STATES
PA Neose Technologies, Inc. (U.S. corporation)
PI US 2004132640 A1 20040708
AI US 2003-411012 A1 20030409 (10)
RLI Continuation-in-part of Ser. No. WO 2002-US32263, filed on 9 Oct 2002, PENDING
PRAI US 2002-407527P 20020828 (60)
US 2002-404249P 20020816 (60)
US 2002-396594P 20020717 (60)
US 2002-391777P 20020625 (60)
US 2002-387292P 20020607 (60)
DT Utility
FS APPLICATION
LREP MORGAN, LEWIS & BOCKIUS LLP, 1701 MARKET STREET, PHILADELPHIA, PA, 19103-2921
CLMN Number of Claims: 77
ECL Exemplary Claim: 1
DRWN 497 Drawing Page(s)
LN.CNT 19255
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention includes methods and compositions for remodeling a peptide molecule, including the addition or deletion of one or more glycosyl groups to a peptide, and/or the addition of a modifying group to a peptide.

L6 ANSWER 5 OF 44 USPATFULL on STN
AN 2004:171925 USPATFULL
TI Progesterone receptor-regulated gene expression and methods related thereto
IN Horwitz, Kathryn B., Greenwood Village, CO, UNITED STATES

Richer, Jennifer, Denver, CO, UNITED STATES

PA The Regents of the University of Colorado (U.S. corporation)

PI US 2004132086 A1 20040708

AI US 2004-776827 A1 20040210 (10)

RLI Division of Ser. No. US 2001-814915, filed on 21 Mar 2001, PENDING

PRAI US 2000-214870P 20000628 (60)

DT Utility

FS APPLICATION

LREP SHERIDAN ROSS PC, 1560 BROADWAY, SUITE 1200, DENVER, CO, 80202

CLMN Number of Claims: 83

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 10988

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Disclosed are expression profiles of genes that are regulated by progesterone receptors, and particularly by progesterone receptor isoforms PR-A and PR-B. Methods for using such genes to identifying progesterone receptor agonist and antagonist ligands are described. Also described are methods for identifying isoform-specific progesterone receptor ligands, for identifying tissue-specific progesterone receptor ligands, and for determining the profile of genes regulated by progesterone receptors in a breast tumor sample. In addition, pluralities of polynucleotides from genes that are regulated by progesterone receptors are disclosed, as are pluralities of antibodies that selectively bind to proteins encoded by such genes.

L6 ANSWER 6 OF 44 USPATFULL on STN

AN 2004:165910 USPATFULL

TI Immunogenicity of glucan binding protein

IN Smith, Daniel J., Natick, MA, UNITED STATES

Taubman, Martin A., Newtonville, MA, UNITED STATES

PI US 2004127400 A1 20040701

AI US 2003-383930 A1 20030307 (10)

PRAI US 2002-402483P 20020808 (60)

US 2002-363209P 20020307 (60)

DT Utility

FS APPLICATION

LREP Ingrid A. Beattie, Ph.D., Mintz, Levin, Cohn, Ferris, Glovsky and Popeo,P.C., One Financial Center, Boston, MA, 02111

CLMN Number of Claims: 32

ECL Exemplary Claim: 1

DRWN 12 Drawing Page(s)

LN.CNT 3002

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Immunogenic compositions and subunit vaccines for dental caries are described which comprise peptide subunits of glucan binding protein-B

and peptide subunits of glucan binding protein-B in combination with peptide subunits of ***glucosyltransferase*** . Methods of provoking an immune response to S. mutans glucan binding protein-B or ***glucosyltransferase*** . Methods of immunizing a mammal against dental caries are also described, along with antibodies which bind particular epitopes of glucan binding protein-B or ***glucosyltransferase*** .

L6 ANSWER 7 OF 44 USPATFULL on STN
AN 2004:165351 USPATFULL
TI Follicle stimulating hormone: remodeling and glycoconjugation of FSH
IN DeFrees, Shawn, North Wales, PA, UNITED STATES
Zopf, David, Wayne, PA, UNITED STATES
Bayer, Robert, San Diego, CA, UNITED STATES
Bowe, Caryn, Doylestown, PA, UNITED STATES
Hakes, David, Willow Grove, PA, UNITED STATES
Chen, Xi, Lansdale, PA, UNITED STATES
PA Neose Technologies, Inc. (U.S. corporation)
PI US 2004126838 A1 20040701
AI US 2003-410997 A1 20030409 (10)
RLI Continuation-in-part of Ser. No. US 2003-360779, filed on 19 Feb 2003, PENDING Continuation-in-part of Ser. No. US 2003-360770, filed on 6 Jan 2003, PENDING Continuation-in-part of Ser. No. US 2002-287994, filed on 5 Nov 2002, PENDING Continuation of Ser. No. WO 2002-US32263, filed on 9 Oct 2002, PENDING
PRAI US 2002-407527P 20020828 (60)
US 2002-404249P 20020816 (60)
US 2002-396594P 20020717 (60)
US 2002-391777P 20020625 (60)
US 2002-387292P 20020607 (60)
US 2001-334301P 20011128 (60)
US 2001-334233P 20011128 (60)
DT Utility
FS APPLICATION
LREP MORGAN, LEWIS & BOCKIUS LLP, 1701 MARKET STREET, PHILADELPHIA, PA, 19103-2921
CLMN Number of Claims: 115
ECL Exemplary Claim: 1
DRWN 497 Drawing Page(s)
LN.CNT 19355
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention includes methods and compositions for remodeling a peptide molecule, including the addition or deletion of one or more glycosyl groups to a peptide, and/or the addition of a modifying group to a peptide.

L6 ANSWER 8 OF 44 USPATFULL on STN

AN 2004:150947 USPATFULL

TI Interferon beta: remodeling and glycoconjugation of interferon beta

IN DeFrees, Shawn, North Wales, PA, UNITED STATES
Zopf, David, Wayne, PA, UNITED STATES
Bayer, Robert, San Diego, CA, UNITED STATES
Bowe, Caryn, Doylestown, PA, UNITED STATES
Hakes, David, Willow Grove, PA, UNITED STATES
Chen, Xi, Lansdale, PA, UNITED STATES

PA Neose Technologies, Inc. (U.S. corporation)

PI US 2004115168 A1 20040617

AI US 2003-410930 A1 20030409 (10)

RLI Continuation-in-part of Ser. No. US 2003-360779, filed on 19 Feb 2003, PENDING Continuation-in-part of Ser. No. US 2003-360770, filed on 6 Jan 2003, PENDING Continuation-in-part of Ser. No. US 2002-287994, filed on 5 Nov 2002, PENDING Continuation of Ser. No. WO 2002-US32263, filed on 9 Oct 2002, PENDING

PRAI US 2002-407527P 20020828 (60)
US 2002-404249P 20020816 (60)
US 2002-396594P 20020717 (60)
US 2002-391777P 20020625 (60)
US 2002-387292P 20020607 (60)
US 2001-334301P 20011128 (60)
US 2001-334233P 20011128 (60)
US 2001-344692P 20011019 (60)
US 2001-328523P 20011010 (60)

DT Utility

FS APPLICATION

LREP MORGAN, LEWIS & BOCKIUS LLP, 1701 MARKET STREET, PHILADELPHIA, PA, 19103-2921

CLMN Number of Claims: 119

ECL Exemplary Claim: 1

DRWN 497 Drawing Page(s)

LN.CNT 19412

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention includes methods and compositions for remodeling a peptide molecule, including the addition or deletion of one or more glycosyl groups to a peptide, and/or the addition of a modifying group to a peptide.

L6 ANSWER 9 OF 44 USPATFULL on STN

AN 2004:140285 USPATFULL

TI Glucan chain length domains

IN Commuri, Padma, Ankeny, IA, UNITED STATES
Keeling, Peter L., Ames, IA, UNITED STATES
Ramirez, Nona, Ames, IA, UNITED STATES

McKean, Angela, Ames, IA, UNITED STATES
Gao, Zhong, Ames, IA, UNITED STATES
Guan, Hanping, Ames, IA, UNITED STATES

PI US 2004107461 A1 20040603

AI US 2002-109048 A1 20020329 (10)

PRAI US 2001-279720P 20010330 (60)

DT Utility

FS APPLICATION

LREP NIXON & VENDERHYE P.C., 8th Floor, 1100 North Glebe Road, Arlington, VA, 22201-4714

CLMN Number of Claims: 53

ECL Exemplary Claim: 1

DRWN 22 Drawing Page(s)

LN.CNT 12564

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to a method for changing the glucan chain lengths using fusion protein domains of various starch synthase enzymes in any starch or starch granule producing organism. The invention relates to identification of a GLucan ASSociation domain (herein after referred to as "GLASS" domain) of granule bound starch synthase (GBSS) used in combination with any other GLYcosyl TRransferase domain otherwise referred to as pfam00534-catalytic domain (herein after referred to as "GLYTR" domain) of one or more of any of the other starch synthase enzymes. The invention relates to identifying and using the new and surprising discovery that starch synthases are composed of at least two distinct functional domains herein after labeled as "GLASS" and "GLYTR". More specifically, this invention relates to the genetic constructs that encode the fusions of the above domains and to the plants transformed with said constructs. The method of invention can thus be used in particular to provide a modified profile of starch granule associated starch synthase (SS) enzymes and by which modified glucan chain lengths of amylopectin and hence, modified starches and or complexes will be generated. This can be done in any organism and more particularly any plant that stores or synthesizes starch in any of its parts, such as potato, sweet potato, cassaya, pea, taro, banana, yam and cereal crops such as rice, maize, wheat, barley, oats, and sorghum.

L6 ANSWER 10 OF 44 USPATFULL on STN

AN 2004:107626 USPATFULL

TI Interferon alpha: remodeling and glycoconjugation of interferon alpha

IN DeFrees, Shawn, North Wales, PA, UNITED STATES
Zopf, David, Wayne, PA, UNITED STATES
Bayer, Robert, San Diego, CA, UNITED STATES
Bowe, Caryn, Doylestown, PA, UNITED STATES
Hakes, David, Willow Grove, PA, UNITED STATES
Chen, Xi, Lansdale, PA, UNITED STATES

PA Neose Technologies, Inc. (U.S. corporation)

PI US 2004082026 A1 20040429

AI US 2003-411049 A1 20030409 (10)

RLI Continuation-in-part of Ser. No. US 2003-360779, filed on 19 Feb 2003, PENDING Continuation-in-part of Ser. No. US 2003-360770, filed on 6 Jan 2003, PENDING Continuation-in-part of Ser. No. US 2002-287994, filed on 5 Nov 2002, PENDING Continuation of Ser. No. WO 2002-US32263, filed on 9 Oct 2002, PENDING

PRAI US 2002-407527P 20020828 (60)
US 2002-404249P 20020816 (60)
US 2002-396594P 20020717 (60)
US 2002-391777P 20020625 (60)
US 2002-387292P 20020607 (60)
US 2001-334301P 20011128 (60)
US 2001-334233P 20011128 (60)
US 2001-344692P 20011019 (60)
US 2001-328523P 20011010 (60)

DT Utility

FS APPLICATION

LREP MORGAN, LEWIS & BOCKIUS LLP, 1701 MARKET STREET, PHILADELPHIA, PA, 19103-2921

CLMN Number of Claims: 126

ECL Exemplary Claim: 1

DRWN 497 Drawing Page(s)

LN.CNT 19445

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention includes a multitude of methods and compositions for remodeling a peptide molecule, including the addition or deletion of one or more glycosyl groups to a peptide, and/or the addition of a modifying group to a peptide.

L6 ANSWER 11 OF 44 USPATFULL on STN

AN 2004:101966 USPATFULL

TI Granulocyte colony stimulating factor: remodeling and glycoconjugation of G-CSF

IN DeFrees, Shawn, North Wales, PA, UNITED STATES
Zopf, David, Wayne, PA, UNITED STATES
Bayer, Robert, San Diego, CA, UNITED STATES
Bowe, Caryn, Doylestown, PA, UNITED STATES
Hakes, David, Willow Grove, PA, UNITED STATES
Chen, Xi, Lansdale, PA, UNITED STATES

PA Neose Technologies, Inc. (U.S. corporation)

PI US 2004077836 A1 20040422

AI US 2003-410962 A1 20030409 (10)

RLI Continuation-in-part of Ser. No. US 2003-360779, filed on 19 Feb 2003, PENDING Continuation-in-part of Ser. No. US 2003-360770, filed on 6 Jan

2003, PENDING Continuation-in-part of Ser. No. US 2002-287994, filed on 5 Nov 2002, PENDING Continuation of Ser. No. WO 2002-US32263, filed on 9 Oct 2002, PENDING

PRAI US 2002-407527P 20020828 (60)
US 2002-404249P 20020816 (60)
US 2002-396594P 20020717 (60)
US 2002-391777P 20020625 (60)
US 2002-387292P 20020607 (60)
US 2001-334301P 20011128 (60)
US 2001-334233P 20011128 (60)
US 2001-344692P 20011019 (60)
US 2001-328523P 20011010 (60)

DT Utility

FS APPLICATION

LREP MORGAN, LEWIS & BOCKIUS LLP, 1701 MARKET STREET, PHILADELPHIA, PA, 19103-2921

CLMN Number of Claims: 111

ECL Exemplary Claim: 1

DRWN 497 Drawing Page(s)

LN.CNT 19316

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention includes methods and compositions for remodeling a peptide molecule, including the addition or deletion of one or more glycosyl groups to a peptide, and/or the addition of a modifying group to a peptide.

L6 ANSWER 12 OF 44 USPATFULL on STN

AN 2004:101228 USPATFULL

TI Whole cell engineering by mutagenizing a substantial portion of a starting genome, combining mutations, and optionally repeating

IN Short, Jay M., Rancho Santa Fe, CA, UNITED STATES

PI US 2004077090 A1 20040422

AI US 2003-383798 A1 20030306 (10)

RLI Continuation of Ser. No. US 2000-677584, filed on 30 Sep 2000, ABANDONED Continuation-in-part of Ser. No. US 2000-594459, filed on 14 Jun 2000, GRANTED, Pat. No. US 6605449 Continuation-in-part of Ser. No. US 2000-522289, filed on 9 Mar 2000, GRANTED, Pat. No. US 6358709 Continuation-in-part of Ser. No. US 2000-498557, filed on 4 Feb 2000, PENDING Continuation-in-part of Ser. No. US 2000-495052, filed on 31 Jan 2000, GRANTED, Pat. No. US 6479258

PRAI US 1999-156815P 19990929 (60)

DT Utility

FS APPLICATION

LREP HALE AND DORR LLP, 300 PARK AVENUE, NEW YORK, NY, 10022

CLMN Number of Claims: 22

ECL Exemplary Claim: 1

DRWN 28 Drawing Page(s)

LN.CNT 37121

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An invention comprising cellular transformation, directed evolution, and screening methods for creating novel transgenic organisms having desirable properties. Thus in one aspect, this invention relates to a method of generating a transgenic organism, such as a microbe or a plant, having a plurality of traits that are differentially activatable. Also, a method of retooling genes and gene pathways by the introduction of regulatory sequences, such as promoters, that are operable in an intended host, thus conferring operability to a novel gene pathway when it is introduced into an intended host. For example a novel man-made gene pathway, generated based on microbially-derived progenitor templates, that is operable in a plant cell. Furthermore, a method of generating novel host organisms having increased expression of desirable traits, recombinant genes, and gene products.

L6 ANSWER 13 OF 44 USPATFULL on STN

AN 2004:94708 USPATFULL

TI Molecular toxicology modeling

IN Mendrick, Donna, Gaithersburg, MD, UNITED STATES
Porter, Mark, Gaithersburg, MD, UNITED STATES
Johnson, Kory, Gaithersburg, MD, UNITED STATES
Higgs, Brandon, Gaithersburg, MD, UNITED STATES
Castle, Arthur, Gaithersburg, MD, UNITED STATES
Elashoff, Michael, Gaithersburg, MD, UNITED STATES

PI US 2004072160 A1 20040415

AI US 2002-152319 A1 20020522 (10)

PRAI US 2001-292335P 20010522 (60)
US 2001-297523P 20010613 (60)
US 2001-298925P 20010619 (60)
US 2001-303810P 20010710 (60)
US 2001-303807P 20010710 (60)
US 2001-303808P 20010710 (60)
US 2001-315047P 20010828 (60)
US 2001-324928P 20010927 (60)
US 2001-330867P 20011101 (60)
US 2001-330462P 20011022 (60)
US 2001-331805P 20011121 (60)
US 2001-336144P 20011206 (60)
US 2001-340873P 20011219 (60)
US 2002-357843P 20020221 (60)
US 2002-357842P 20020221 (60)
US 2002-357844P 20020221 (60)
US 2002-364134P 20020315 (60)
US 2002-370206P 20020408 (60)

US 2002-370247P 20020408 (60)
US 2002-370144P 20020408 (60)
US 2002-371679P 20020412 (60)
US 2002-372794P 20020417 (60)

DT Utility

FS APPLICATION

LREP MORGAN LEWIS & BOCKIUS LLP, 1111 PENNSYLVANIA AVENUE NW, WASHINGTON, DC, 20004

CLMN Number of Claims: 59

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 27909

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention is based on the elucidation of the global changes in gene expression and the identification of toxicity markers in tissues or cells exposed to a known renal toxin. The genes may be used as toxicity markers in drug screening and toxicity assays. The invention includes a database of genes characterized by toxin-induced differential expression that is designed for use with microarrays and other solid-phase probes.

L6 ANSWER 14 OF 44 USPATFULL on STN

AN 2004:83455 USPATFULL

TI Protein remodeling methods and proteins/peptides produced by the methods

IN DeFrees, Shawn, North Wales, PA, UNITED STATES
Zopf, David, Wayne, PA, UNITED STATES
Bayer, Robert, San Diego, CA, UNITED STATES
Hakes, David, Willow Grove, PA, UNITED STATES
Chen, Xi, Lansdale, PA, UNITED STATES

PA Neose Technologies, Inc. (U.S. corporation)

PI US 2004063911 A1 20040401

AI US 2003-411026 A1 20030409 (10)

RLI Continuation-in-part of Ser. No. US 2003-360779, filed on 19 Feb 2003, PENDING Continuation-in-part of Ser. No. US 2003-360770, filed on 6 Jan 2003, PENDING Continuation-in-part of Ser. No. US 2002-287994, filed on 5 Nov 2002, PENDING Continuation of Ser. No. WO 2002-US32263, filed on 9 Oct 2002, PENDING

PRAI US 2002-407527P 20020828 (60)
US 2002-404249P 20020816 (60)
US 2002-396594P 20020717 (60)
US 2002-391777P 20020625 (60)
US 2002-387292P 20020607 (60)
US 2001-334301P 20011128 (60)
US 2001-334233P 20011128 (60)
US 2001-344692P 20011019 (60)
US 2001-328523P 20011010 (60)

DT Utility

FS APPLICATION

LREP MORGAN, LEWIS & BOCKIUS LLP, 1701 MARKET STREET, PHILADELPHIA, PA, 19103-2921

CLMN Number of Claims: 39

ECL Exemplary Claim: 1

DRWN 497 Drawing Page(s)

LN.CNT 18872

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention includes methods and compositions for remodeling a peptide molecule, including the addition or deletion of one or more glycosyl groups to a peptide, and/or the addition of a modifying group to a peptide.

L6 ANSWER 15 OF 44 USPATFULL on STN

AN 2004:70606 USPATFULL

TI Enzymes involved in glycoprotein and glycolipid metabolism

IN Lal, Preeti G, Santa Clara, CA, UNITED STATES
Yue, Henry, Sunnyvale, CA, UNITED STATES
Lu, Dyung Aina M., San Jose, CA, UNITED STATES
Gandhi, Ameena R., San Francisco, CA, UNITED STATES
Thangavelu, Kavitha, Sunnyvale, CA, UNITED STATES
Chawla, Narinder K., Union City, CA, UNITED STATES
Baughn, Mariah R., San Leandro, CA, UNITED STATES

PI US 2004053834 A1 20040318

AI US 2003-415186 A1 20030423 (10)
WO 2001-US44973 20011030

DT Utility

FS APPLICATION

LREP INCYTE CORPORATION, 3160 PORTER DRIVE, PALO ALTO, CA, 94304

CLMN Number of Claims: 59

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 4821

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention provides human enzymes involved in glycoprotein and glycolipid metabolism (GLYCOS) and polynucleotides which identify and encode GLYCOS. The invention also provides expression vectors, host cells, antibodies, agonists, and antagonists. The invention also provides methods for diagnosing, treating, or preventing disorder associated with aberrant expression of GLYCOS.

L6 ANSWER 16 OF 44 USPATFULL on STN

AN 2004:57444 USPATFULL

TI Alpha galalctosidase a: remodeling and glycoconjugation of alpha galactosidase A

IN DeFrees, Shawn, North Wales, PA, UNITED STATES
Zopf, David, Wayne, PA, UNITED STATES
Bayer, Robert, San Diego, CA, UNITED STATES
Bowe, Caryn, Doylestown, PA, UNITED STATES
Hakes, David, Willow Grove, PA, UNITED STATES
Chen, Xi, Lansdale, PA, UNITED STATES
PA Neose Technologies, Inc. (U.S. corporation)
PI US 2004043446 A1 20040304
AI US 2003-411037 A1 20030409 (10)
RLI Continuation-in-part of Ser. No. WO 2002-US32263, filed on 9 Oct 2002, PENDING
PRAI US 2002-407527P 20020828 (60)
US 2002-404249P 20020816 (60)
US 2002-396594P 20020717 (60)
US 2002-391777P 20020625 (60)
US 2002-387292P 20020607 (60)
DT Utility
FS APPLICATION
LREP MORGAN, LEWIS & BOCKIUS LLP, 1701 MARKET STREET, PHILADELPHIA, PA, 19103-2921
CLMN Number of Claims: 122
ECL Exemplary Claim: 1
DRWN 497 Drawing Page(s)
LN.CNT 19395
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention includes methods and compositions for remodeling a peptide molecule, including the addition or deletion of one or more glycosyl groups to a peptide, and/or the addition of a modifying group to a peptide.

L6 ANSWER 17 OF 44 USPATFULL on STN
AN 2004:20717 USPATFULL
TI Rice promoters for regulation of plant expression
IN Budworth, Paul, San Diego, CA, UNITED STATES
Moughamer, Todd, San Diego, CA, UNITED STATES
Briggs, Steven P., Del Mar, CA, UNITED STATES
Cooper, Bret, La Jolla, CA, UNITED STATES
Glazebrook, Jane, San Diego, CA, UNITED STATES
Goff, Stephen Arthur, Encinitas, CA, UNITED STATES
Katagiri, Fumiaki, San Diego, CA, UNITED STATES
Kreps, Joel, Carlsbad, CA, UNITED STATES
Provart, Nicholas, Toronto, CANADA
Ricke, Darrell, San Diego, CA, UNITED STATES
Zhu, Tong, San Diego, CA, UNITED STATES
PI US 2004016025 A1 20040122
AI US 2002-260238 A1 20020926 (10)

PRAI US 2001-325448P 20010926 (60)
US 2001-325277P 20010926 (60)
US 2002-370620P 20020404 (60)
DT Utility
FS APPLICATION
LREP James E. Butler, Torrey Mesa Research Institute, 3115 Merryfield Row, San Diego, CA, 92121
CLMN Number of Claims: 77
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 18818
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention provides a method to identify a plurality of plant promoters having a particular characteristic as well as the sequence of promoters having one of those characteristics.

L6 ANSWER 18 OF 44 USPATFULL on STN
AN 2004:18738 USPATFULL
TI Cardiotoxin molecular toxicology modeling
IN Mendrick, Donna, Gaithersburg, MD, UNITED STATES
Porter, Mark, Gaithersburg, MD, UNITED STATES
Johnson, Kory, Gaithersburg, MD, UNITED STATES
Higgs, Brandon, Gaithersburg, MD, UNITED STATES
Castle, Arthur, Gaithersburg, MD, UNITED STATES
Elashoff, Michael, Gaithersburg, MD, UNITED STATES
PI US 2004014040 A1 20040122
AI US 2002-191803 A1 20020710 (10)
PRAI US 2001-303819P 20010710 (60)
US 2001-305623P 20010717 (60)
US 2002-369351P 20020403 (60)
US 2002-377611P 20020506 (60)
DT Utility
FS APPLICATION
LREP MORGAN LEWIS & BOCKIUS LLP, 1111 PENNSYLVANIA AVENUE NW, WASHINGTON, DC, 20004
CLMN Number of Claims: 59
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 15812
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention is based on the elucidation of the global changes in gene expression and the identification of toxicity markers in tissues or cells exposed to a known cardiotoxin. The genes may be used as toxicity markers in drug screening and toxicity assays. The invention includes a database of genes characterized by toxin-induced differential expression that is designed for use with microarrays and other

solid-phase probes.

L6 ANSWER 19 OF 44 USPATFULL on STN
AN 2004:14292 USPATFULL
TI Identification and characterization of plant genes
IN Lange, B. Markus, San Diego, CA, UNITED STATES
Ghassemian, Majid, Carlsbad, CA, UNITED STATES
Briggs, Steven P., Del Mar, CA, UNITED STATES
Cooper, Bret, La Jolla, CA, UNITED STATES
Glazebrook, Jane, San Diego, CA, UNITED STATES
Goff, Stephen Arthur, Encinitas, CA, UNITED STATES
Katagiri, Fumiaki, San Diego, CA, UNITED STATES
Kreps, Joel, Carlsbad, CA, UNITED STATES
Moughamer, Todd, San Diego, CA, UNITED STATES
Provart, Nicholas, Toronto, CANADA
Ricke, Darrell, San Diego, CA, UNITED STATES
Zhu, Tong, San Diego, CA, UNITED STATES
PI US 2004010815 A1 20040115
AI US 2002-259194 A1 20020926 (10)
PRAI US 2001-325277P 20010926 (60)
US 2002-370743P 20020404 (60)
US 2002-370620P 20020404 (60)
US 2001-325277P 20010926 (60)
DT Utility
FS APPLICATION
LREP TORREY MESA RESEARCH INSTITUTE, INTELLECTUAL PROPERTY DEPARTMENT, 3115 MERRYFIELD ROW, SAN DIEGO, CA, 92121
CLMN Number of Claims: 113
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 10764
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Disclosed are polynucleotide and polypeptide sequences involved in or associated with isoprenoid biosynthesis in plants. Also disclosed are uses for such sequences.

L6 ANSWER 20 OF 44 USPATFULL on STN
AN 2004:8550 USPATFULL
TI Novel regulatory genes involved in condensed tannin synthesis in plants
IN Gruber, Margaret Y., Saskatoon; CANADA
Ray, Heather, Saskatoon, CANADA
PI US 2004006793 A1 20040108
AI US 2003-352773 A1 20030128 (10)
RLI Continuation of Ser. No. WO 2001-CA1091, filed on 27 Jul 2001, UNKNOWN
PRAI WO 2002-104122 20020207
US 2000-221560P 20000728 (60)

DT Utility

FS APPLICATION

LREP SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A., P.O. BOX 2938, MINNEAPOLIS, MN, 55402

CLMN Number of Claims: 49

ECL Exemplary Claim: 1

DRWN 5 Drawing Page(s)

LN.CNT 2561

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides two novel regulatory genes and encoded proteins which can be used to alter the biosynthesis and accumulation of condensed tannin levels in plants and plant tissues. The present invention further encompasses transgenic constructs containing the novel regulatory genes herein referred to as Ulimyc, Corniculmyc and Japmyc, for use in the transformation of plants and plant tissues and transgenic plants containing such constructs. The identification and characterization of these novel genes provide a mechanism for altering tannin production in plants and allows one to alter such levels to produce a variety of benefits in the field of agriculture, land reclamation animal farming and food technology in general.

L6 ANSWER 21 OF 44 USPATFULL on STN

AN 2004:7768 USPATFULL

TI Targeted therapeutic proteins

IN LeBowitz, Jonathan H., Frontenac, MO, UNITED STATES
Beverley, Stephen M., Clayton, MO, UNITED STATES

PA Symbiontics, Inc. (U.S. corporation)

PI US 2004006008 A1 20040108

AI US 2002-272483 A1 20021016 (10)

RLI Continuation-in-part of Ser. No. US 2002-136841, filed on 30 Apr 2002, PENDING

PRAI US 2001-287531P 20010430 (60)
US 2001-304609P 20010710 (60)
US 2001-329461P 20011015 (60)
US 2002-351276P 20020123 (60)
US 2002-351276P 20020123 (60)
US 2002-384452P 20020529 (60)
US 2002-386019P 20020605 (60)
US 2002-408816P 20020906 (60)

DT Utility

FS APPLICATION

LREP TESTA, HURWITZ & THIBEAULT, LLP, HIGH STREET TOWER, 125 HIGH STREET, BOSTON, MA, 02110

CLMN Number of Claims: 57

ECL Exemplary Claim: 1

DRWN 9 Drawing Page(s)

LN.CNT 3120

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Targeted therapeutics that localize to a specific subcellular compartment such as the lysosome are provided. The targeted therapeutics include a therapeutic agent and a targeting moiety that binds a receptor on an exterior surface of the cell, permitting proper subcellular localization of the targeted therapeutic upon internalization of the receptor. Nucleic acids, cells, and methods relating to the practice of the invention are also provided.

L6 ANSWER 22 OF 44 USPATFULL on STN

AN 2004:7355 USPATFULL

TI Isomaltulose synthases, polynucleotides encoding them and uses therefor

IN Birch, Robert George, Queensland, AUSTRALIA
Wu, Luguang, Queensland, AUSTRALIA

PI US 2004005589 A1 20040108

AI US 2003-374726 A1 20030227 (10)

RLI Continuation-in-part of Ser. No. WO 2001-AU1084, filed on 29 Aug 2001, UNKNOWN

PRAI AU 2000-9768 20000829

DT Utility

FS APPLICATION

LREP HELLER EHRMAN WHITE & MCAULIFFE LLP, 1666 K STREET,NW, SUITE 300, WASHINGTON, DC, 20006

CLMN Number of Claims: 54

ECL Exemplary Claim: 1

DRWN 19 Drawing Page(s)

LN.CNT 5855

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention is directed to novel enzymes that convert sucrose to isomaltulose. More particularly, the present invention discloses novel sucrose isomerases, polynucleotides encoding these sucrose isomerases, methods for isolating such polynucleotides and nucleic acid constructs that express these polynucleotides. Also disclosed are cells, including transformed bacterial or plant cells, and differentiated plants comprising cells, which contain these sucrose isomerase-encoding polynucleotides, as well as extracts thereof. Methods of producing isomaltulose are also disclosed which use the polypeptides, polynucleotides, cells, cell extracts and plants of the invention.

L6 ANSWER 23 OF 44 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1

AN 2003:473133 CAPLUS

DN 139:19349

TI Diagnostic assays for determination of dental caries susceptibility

IN Gregory, Richard L.

PA USA

SO U.S. Pat. Appl. Publ., 26 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2003113823	A1	20030619	US 2002-268017	20021009

PRAI US 2001-328537P P 20011011

AB The invention overcomes the limitations of the prior art by providing rapid assays for predicting the likelihood of caries development in patients. The assays allow implementation of appropriate dental care measures during a patient visit depending on the results of the assay. The assay utilizes the finding that caries-free children and adults have significantly higher levels of naturally occurring protective salivary IgA antibody to S. mutans than caries-active subjects. The assays are carried out using patient saliva. The speed and ease of use of the assay allows dental practitioners to assess at an early stage the relative risk of future caries formation. With this information, preventive methods may be applied only to those detd. to be at risk.

L6 ANSWER 24 OF 44 USPATFULL on STN
AN 2003:320409 USPATFULL
TI Transgenic cells expressing ***glucosyltransferase*** nucleic acids
IN Bowles, Diana Joy, Heslington, UNITED KINGDOM
Li, Yi, York, UNITED KINGDOM
Lim, Eng-Kiat, York, UNITED KINGDOM
PI US 2003226162 A1 20031204
AI US 2002-203319 A1 20021203 (10)
WO 2001-GB477 20010208
PRAI GB 2000-2814 20000209
DT Utility
FS APPLICATION
LREP CROWELL & MORING LLP, INTELLECTUAL PROPERTY GROUP, P.O. BOX 14300, WASHINGTON, DC, 20044-4300
CLMN Number of Claims: 18
ECL Exemplary Claim: 1
DRWN 59 Drawing Page(s)
LN.CNT 1132
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to transgenic cells which have been transformed with nucleic acids encoding ***glucosyltransferase*** polypeptides (GTases) and vectors for use in transformation of said cells.

L6 ANSWER 25 OF 44 USPATFULL on STN
AN 2003:238745 USPATFULL

TI Genes associated with vascular disease

IN Astromoff, Anna, San Carlos, CA, UNITED STATES
Bandman, Olga, Mountain View, CA, UNITED STATES
Cocks, Benjamin G., Sunnyvale, CA, UNITED STATES

PI US 2003166903 A1 20030904

AI US 2002-133013 A1 20020425 (10)

PRAI US 2001-287067P 20010427 (60)

DT Utility

FS APPLICATION

LREP LEGAL DEPARTMENT, INCYTE GENOMICS, INC., 3160 PORTER DRIVE, PALO ALTO, CA, 94304

CLMN Number of Claims: 20

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 3022

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to a combination comprising a plurality of cDNAs which are differentially expressed in vascular endothelium and which may be used in their entirety or in part to diagnose, to stage, to treat, or to monitor the treatment of a subject with a vascular disorder.

L6 ANSWER 26 OF 44 USPATFULL on STN

AN 2003:165984 USPATFULL

TI 25 human secreted proteins

IN Rosen, Craig A., Laytonsville, MD, UNITED STATES
Ni, Jian, Germantown, MD, UNITED STATES
Florence, Kimberly A., Rockville, MD, UNITED STATES
Fiscella, Michele, Bethesda, MD, UNITED STATES
Wei, Ping, Brookeville, MD, UNITED STATES
Baker, Kevin P., Darnestown, MD, UNITED STATES
Birse, Charles E., North Potomac, MD, UNITED STATES
Young, Paul E., Gaithersburg, MD, UNITED STATES
Komatsoulis, George A., Silver Spring, MD, UNITED STATES
Moore, Paul A., Germantown, MD, UNITED STATES
Soppet, Daniel R., Centreville, VA, UNITED STATES

PA Human Genome Sciences, Inc., Rockville, MD, UNITED STATES, 20850 (U.S. corporation)

PI US 2003113840 A1 20030619

AI US 2002-60255 A1 20020201 (10)

RLI Continuation of Ser. No. US 2001-781417, filed on 13 Feb 2001, ABANDONED
Continuation-in-part of Ser. No. WO 2000-US22325, filed on 16 Aug 2000, PENDING

PRAI US 1999-149182P 19990817 (60)

DT Utility

FS APPLICATION

LREP HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850

CLMN Number of Claims: 23

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 20339

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to novel human secreted proteins and isolated nucleic acids containing the coding regions of the genes encoding such proteins. Also provided are vectors, host cells, antibodies, and recombinant methods for producing human secreted proteins. The invention further relates to diagnostic and therapeutic methods useful for diagnosing and treating diseases, disorders, and/or conditions related to these novel human secreted proteins.

L6 ANSWER 27 OF 44 USPATFULL on STN

AN 2003:119691 USPATFULL

TI Subcellular targeting of therapeutic proteins

IN LeBowitz, Jonathan H., Frontenac, MO, UNITED STATES
Beverley, Stephen M., Clayton, MO, UNITED STATES

PA Symbiontics, Inc. (U.S. corporation)

PI US 2003082176 A1 20030501

AI US 2002-136841 A1 20020430 (10)

PRAI US 2001-287531P 20010430 (60)
US 2001-304609P 20010710 (60)
US 2001-329461P 20011015 (60)
US 2002-351276P 20020123 (60)

DT Utility

FS APPLICATION

LREP TESTA, HURWITZ & THIBEAULT, LLP, HIGH STREET TOWER, 125 HIGH STREET, BOSTON, MA, 02110

CLMN Number of Claims: 57

ECL Exemplary Claim: 1

DRWN 12 Drawing Page(s)

LN.CNT 1959

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Targeted therapeutics that localize to a specific subcellular compartment such as the lysosome are provided. The targeted therapeutics include a therapeutic agent and a targeting moiety that binds a receptor on an exterior surface of the cell, permitting proper subcellular localization of the targeted therapeutic upon internalization of the receptor. Nucleic acids, cells, and methods relating to the practice of the invention are also provided.

L6 ANSWER 28 OF 44 USPATFULL on STN

AN 2003:51147 USPATFULL

TI Detection of mycobacteria

IN Wallis, Robert S., Cleveland, OH, UNITED STATES

PI US 2003036104 A1 20030220

AI US 2001-952554 A1 20010914 (9)

RLI Continuation of Ser. No. US 1996-690347, filed on 26 Jul 1996, GRANTED, Pat. No. US 6383763

DT Utility

FS APPLICATION

LREP MEDLEN & CARROLL, LLP, 101 HOWARD STREET, SUITE 350, SAN FRANCISCO, CA, 94105

CLMN Number of Claims: 25

ECL Exemplary Claim: 1

DRWN 22 Drawing Page(s)

LN.CNT 2917

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention is directed to methods and compositions for the detection of infection and disease due to members of the genus Mycobacterium. In particular, the present invention is well-suited to the detection and identification of patients with disease or infection due to M. tuberculosis or MAC.

L6 ANSWER 29 OF 44 USPATFULL on STN

AN 2003:37563 USPATFULL

TI Progesterone receptor-regulated gene expression and methods related thereto

IN Horwitz, Kathryn B., Greenwood Village, CO, UNITED STATES
Richer, Jennifer, Denver, CO, UNITED STATES

PI US 2003027208 A1 20030206
US 6750015 B2 20040615

AI US 2001-814915 A1 20010321 (9)

PRAI US 2000-214870P 20000628 (60)

DT Utility

FS APPLICATION

LREP Angela Dallas-Pedretti, SHERIDAN ROSS P.C., Suite 1200, 1560 Broadway, Denver, CO, 80202-5141

CLMN Number of Claims: 83

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 4658

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Disclosed are expression profiles of genes that are regulated by progesterone receptors, and particularly by progesterone receptor isoforms PR-A and PR-B. Methods for using such genes to identifying progesterone receptor agonist and antagonist ligands are described. Also described are methods for identifying isoform-specific progesterone receptor ligands, for identifying tissue-specific progesterone receptor ligands, and for determining the profile of genes regulated by

progesterone receptors in a breast tumor sample. In addition, pluralities of polynucleotides from genes that are regulated by progesterone receptors are disclosed, as are pluralities of antibodies that selectively bind to proteins encoded by such genes.

L6 ANSWER 30 OF 44 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2

AN 2003:654451 CAPLUS

DN 139:290782

TI Remote ***glucosyltransferase*** - ***microparticle*** vaccine delivery induces protective immunity in the oral cavity

AU Smith, D. J.; Lam, A.; Barnes, L. A.; King, W. F.; Peacock, Z.; Wise, D. L.; Trantolo, D. J.; Taubman, M. A.

CS Department of Immunology, The Forsyth Institute, Boston, MA, USA

SO Oral Microbiology and Immunology (2003), 18(4), 240-248
CODEN: OMIMEE; ISSN: 0902-0055

PB Blackwell Science Ltd.

DT Journal

LA English

AB Intranasally administered dental caries vaccines show significant promise for human application. Alternate mucosal routes may be required, however, to induce caries-protective salivary IgA antibody in children with respiratory diseases. Since rectal mucosa contains inductive lymphoid tissue, we hypothesized that the rectal route could be used to induce salivary immunity to mutans streptococcal ***glucosyltransferase*** (GTF), resulting in protective immunity to exptl. dental caries. We first explored the ability of ***glucosyltransferase*** , incorporated into polylactide-co-glycolide (PLGA) ***microparticles*** (MP), and administered rectally together with mucosal adjuvant, to induce a salivary IgA antibody response. Groups of Sprague-Dawley rats (6/group) were immunized rectally on days 0, 7, 14 and 21 with a) GTF-MP alone, b) GTF-MP with cholera toxin, c) GTF-MP with detoxified mutant Escherichia coli toxin (dLT), or d) sham immunized with PLGA and cholera toxin. An addnl. group was immunized intranasally with GTF-MP alone. Saliva and nasal washes of all intranasally immunized rats contained IgA antibody to ***glucosyltransferase*** on day 28. Salivary IgA antibody was also detected in 7/12 rats rectally immunized with GTF-MP and cholera toxin or dLT, although responses were lower than those obtained by intranasal immunization. Most fecal exts. from rectally delivered GTF-MP plus cholera toxin or dLT rats contained IgA antibody to GTF-MP. Low levels of fecal IgA antibody were detected in 3/6 intranasally immunized rats and 2/6 rats rectally immunized with GTF-MP alone. We then examd. the extent to which salivary IgA antibody induced by the rectal route could be protective. At 25, 31 and 38 days of age, two groups of female Sprague-Dawley rats (13/group) were rectally immunized with GTF-MP and cholera toxin or with empty ***microparticles*** and cholera toxin (sham group). A third group was intranasally immunized with GTF-MP alone.

After demonstrating salivary IgA responses to GTF in most GTF-immunized rats, all animals were infected with streptomycin-resistant Streptococcus sobrinus and placed on diet 2000. After 79 days of infection, total caries on molar surfaces were lower in both rectally (7.9 .+. 1.0) and intranasally (7.1 .+. 0.9; P < 0.0.03) immunized groups compared with the sham-immunized group (11.9 .+. 1.6). Smooth surface caries were significantly lower (P < 0.05) in both rectally and intranasally immunized groups. These results support the interconnectedness of the mucosal immune system and indicate that rectal immunization with GTF-MP, together with adjuvant, or intranasal immunization with GTF-MP alone, can induce protective levels of salivary antibody in rats.

RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 31 OF 44 USPATFULL on STN

AN 2002:259412 USPATFULL

TI Therapeutic compositions and methods of treating glycolipid storage related disorders

IN Dwek, Raymond A., Oxford, UNITED KINGDOM
Butters, Terence D., Oxford, UNITED KINGDOM

PI US 2002142985 A1 20021003

AI US 2001-42527 A1 20011019 (10)

RLI Continuation of Ser. No. WO 2000-GB1560, filed on 20 Apr 2000, UNKNOWN

PRAI GB 1999-9066 19990420

DT Utility

FS APPLICATION

LREP David A. Jackson, Klauber & Jackson, 411 Hackensack Avenue, Hackensack, NJ, 07601

CLMN Number of Claims: 38

ECL Exemplary Claim: 1

DRWN 5 Drawing Page(s)

LN.CNT 1563

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method for treating a glycolipid storage-related disorder, comprising administering a therapeutically effective amount of an inhibitor of glycolipid synthesis in combination with an agent capable of increasing the rate of glycolipid degradation or in combination with bone marrow transplantation. Inhibitors of glycolipid synthesis include N-butyldeoxynojirimycin (NB-DNJ), N-butyldeoxygalactonojirimycin (NB-DGJ) or N-nonyldeoxynojirimycin (NN-DNJ). Glycolipid storage-related disorders include Gaucher disease, Sandhoff's disease, Fabry's disease, Tay-Sach's disease, Niemann-Pick C storage disease, GM1 gangliosidosis, genetic disorders in which neuronal glycolipid accumulation contributes to disease pathology.

L6 ANSWER 32 OF 44 USPATFULL on STN

AN 2002:235410 USPATFULL

TI Combinatorial complex carbohydrate libraries and methods for the manufacture and uses thereof

IN Dukler, Avinoam, Modi'in, ISRAEL
Dotan, Nir, Shoham, ISRAEL

PA Glycominds Ltd. (non-U.S. corporation)

PI US 2002127599 A1 20020912

AI US 2001-860488 A1 20010521 (9)

RLI Division of Ser. No. US 2001-783083, filed on 15 Feb 2001, PENDING
Continuation-in-part of Ser. No. WO 2000-IL99, filed on 17 Feb 2000, UNKNOWN

DT Utility

FS APPLICATION

LREP G.E. EHRLICH (1995) LTD., c/o ANTHONY CASTORINA, SUITE 207, 2001 JEFFERSON DAVIS HIGHWAY, ARLINGTON, VA, 22202

CLMN Number of Claims: 29

ECL Exemplary Claim: 1

DRWN 16 Drawing Page(s)

LN.CNT 3612

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A combinatorial complex carbohydrate library is provided and including a plurality of addressable complex carbohydrate structures.

L6 ANSWER 33 OF 44 USPATFULL on STN

AN 2002:221323 USPATFULL

TI Molecular toxicology modeling

IN Mendrick, Donna L., Mount Airy, MD, UNITED STATES
Porter, Mark W., Germantown, MD, UNITED STATES
Johnson, Kory R., Bethesda, MD, UNITED STATES
Castle, Arthur L., Washington, DC, UNITED STATES
Elashoff, Michael R., Germantown, MD, UNITED STATES

PI US 2002119462 A1 20020829

AI US 2001-917800 A1 20010731 (9)

PRAI US 2000-222040P 20000731 (60)
US 2000-244880P 20001102 (60)
US 2001-290029P 20010511 (60)
US 2001-290645P 20010515 (60)
US 2001-292336P 20010522 (60)
US 2001-295798P 20010606 (60)
US 2001-297457P 20010613 (60)
US 2001-298884P 20010619 (60)
US 2001-303459P 20010709 (60)

DT Utility

FS APPLICATION

LREP MORGAN LEWIS & BOCKIUS LLP, 1111 PENNSYLVANIA AVENUE NW, WASHINGTON, DC, 20004

CLMN Number of Claims: 54

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 9801

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention is based on the elucidation of the global changes in gene expression and the identification of toxicity markers in tissues or cells exposed to a known toxin. The genes may be used as toxicity markers in drug screening and toxicity assays. The invention includes a database of genes characterized by toxin-induced differential expression that is designed for use with microarrays and other solid-phase probes.

L6 ANSWER 34 OF 44 USPATFULL on STN

AN 2002:214279 USPATFULL

TI Methods for therapeutic use of glucosylceramide synthesis inhibitors and composition thereof

IN Walkley, Steven, Bronx, NY, UNITED STATES
Holt, Gordon D., Gaithersburg, MD, UNITED STATES

PI US 2002115667 A1 20020822
US 6683076 B2 20040127

AI US 2001-7306 A1 20011019 (10)

RLI Continuation of Ser. No. WO 2000-GB1563, filed on 20 Apr 2000, UNKNOWN

PRAI GB 2000-9909064 20000420

DT Utility

FS APPLICATION

LREP David A. Jackson, Klauber & Jackson, 411 Hackensack Avenue, Hackensack, NJ, 07601

CLMN Number of Claims: 49

ECL Exemplary Claim: 1

DRWN 1 Drawing Page(s)

LN.CNT 1428

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Methods for treatment of disorders associated with glycolipid accumulation, such as Niemann-Pick Type C (NPC) disease, comprising administering a therapeutically effective amount of an inhibitor of glucosylceramide synthesis. Inhibitors of glucosylceramide synthesis include N-butyldeoxynojirimycin, N-butyldeoxygalactonojirimycin, and N-nonyldeoxynojirimycin; 1-phenyl-2-decanoylamino-3-morpholino-1-propanol (PDMP), D-threo-1-phenyl-2-decanoylamino-3-morpholino-1-propanol and structurally related analogues thereof; and agents capable of increasing the rate of neuronal glycolipid degradation.

L6 ANSWER 35 OF 44 USPATFULL on STN

AN 2002:185601 USPATFULL

TI Combinatorial complex carbohydrate libraries and methods for the manufacture and uses thereof

IN Dukler, Avinoam, Modi'in, ISRAEL
Dotan, Nir, Shoham, ISRAEL
PA Glycominds Ltd. (non-U.S. corporation)
PI US 2002098513 A1 20020725
AI US 2001-860487 A1 20010521 (9)
RLI Division of Ser. No. US 2001-783083, filed on 15 Feb 2001, PENDING
Continuation-in-part of Ser. No. WO 2000-IL99, filed on 17 Feb 2000, UNKNOWN
DT Utility
FS APPLICATION
LREP G.E. EHRLICH (1995) LTD., c/o ANTHONY CASTORINA, SUITE 207, 2001 JEFFERSON DAVIS HIGHWAY, ARLINGTON, VA, 22202
CLMN Number of Claims: 1
ECL Exemplary Claim: 1
DRWN 16 Drawing Page(s)
LN.CNT 3622
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A combinatorial complex carbohydrate library is provided and including a plurality of addressable complex carbohydrate structures.

L6 ANSWER 36 OF 44 USPATFULL on STN
AN 2002:178753 USPATFULL
TI Combinatorial complex carbohydrate libraries and methods for the manufacture and uses thereof
IN Dukler, Avinoam, Modi'in, ISRAEL
Dotan, Nir, Shoham, ISRAEL
PI US 2002094541 A1 20020718
AI US 2001-860559 A1 20010521 (9)
RLI Division of Ser. No. US 2001-783083, filed on 15 Feb 2001, UNKNOWN
DT Utility
FS APPLICATION
LREP G.E. EHRLICH (1995) LTD., c/o ANTHONY CASTORINA, SUITE 207, 2001 JEFFERSON DAVIS HIGHWAY, ARLINGTON, VA, 22202
CLMN Number of Claims: 4
ECL Exemplary Claim: 1
DRWN 16 Drawing Page(s)
LN.CNT 3659
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A combinatorial complex carbohydrate library is provided and including a plurality of addressable complex carbohydrate structures.

L6 ANSWER 37 OF 44 USPATFULL on STN
AN 2002:291078 USPATFULL
TI Polynucleotides and polypeptides derived from corn ear
IN Lalgudi, Raghunath V., Clayton, MO, United States
Ito, Laura Y., Pleasanton, CA, United States

Sherman, Bradley K., Oakland, CA, United States

PA Incyte Genomics, Inc., Palo Alto, CA, United States (U.S. corporation)

PI US 6476212 B1 20021105

AI US 1999-313294 19990514 (9)

PRAI US 1998-86722P 19980526 (60)

DT Utility

FS GRANTED

EXNAM Primary Examiner: Brusca, John S.; Assistant Examiner: Moran, Marjorie A.

LREP Incyte Genomics, Inc., Murry, Lynn E.

CLMN Number of Claims: 5

ECL Exemplary Claim: 1

DRWN 0 Drawing Figure(s); 0 Drawing Page(s)

LN.CNT 23084

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides purified, corn ear-derived polynucleotides (cdps) which encode corn ear-derived polypeptides (CDPs). The invention also provides for the use of cdps or their complements, oligonucleotides, or fragments in methods for determining altered gene expression, to recover regulatory elements, and to follow inheritance of desirable characteristics through hybrid breeding programs. The invention further provides for vectors and host cells containing cdps for the expression of CDPs. The invention additionally provides for (i) use of isolated and purified CDPs to induce antibodies and to screen libraries of compounds and (ii) use of anti-CDP antibodies in diagnostic assays.

L6 ANSWER 38 OF 44 USPATFULL on STN

AN 2002:102276 USPATFULL

TI Detection of mycobacteria

IN Wallis, Robert S., Cleveland, OH, United States

PA Case Western Reserve University, Cleveland, OH, United States (U.S. corporation)

PI US 6383763 B1 20020507

AI US 1996-690347 19960726 (8)

DT Utility

FS GRANTED

EXNAM Primary Examiner: Swartz, Rodney P

LREP Medlen & Carroll, LLP

CLMN Number of Claims: 12

ECL Exemplary Claim: 1

DRWN 34 Drawing Figure(s); 23 Drawing Page(s)

LN.CNT 3091

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention is directed to methods and compositions for the detection of infection and disease due to members of the genus

Mycobacterium. In particular, the present invention is well-suited to the detection and identification of patients with disease or infection due to M. tuberculosis or MAC.

L6 ANSWER 39 OF 44 USPATFULL on STN
AN 2001:229398 USPATFULL
TI Combinatorial complex carbohydrate libraries and methods for the manufacture and uses thereof
IN Dukler, Avinoam, Modi'in, Israel
Dotan, Nir, Shoham, Israel
PA Glycominds Ltd. (non-U.S. corporation)
PI US 2001051349 A1 20011213
AI US 2001-783083 A1 20010215 (9)
RLI Continuation-in-part of Ser. No. WO 2000-IL99, filed on 17 Feb 2000, UNKNOWN
DT Utility
FS APPLICATION
LREP G.E. EHRLICH (1995) LTD., c/o ANTHONY CASTORINA, SUITE 207, 2001 JEFFERSON DAVIS HIGHWAY, ARLINGTON, VA, 22202
CLMN Number of Claims: 63
ECL Exemplary Claim: 1
DRWN 16 Drawing Page(s)
LN.CNT 3742
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A combinatorial complex carbohydrate library is provided and including a plurality of addressable complex carbohydrate structures.

L6 ANSWER 40 OF 44 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 3
AN 2001:549186 CAPLUS
DN 135:255748
TI Facilitated intranasal induction of mucosal and systemic immunity to mutans streptococcal ***glucosyltransferase*** peptide vaccines
AU Smith, Daniel J.; King, William F.; Barnes, Leigh A.; Trantolo, Debra; Wise, Donald L.; Taubman, Martin A.
CS Department of Immunology, The Forsyth Institute, Boston, MA, 02115, USA
SO Infection and Immunity (2001), 69(8), 4767-4773
CODEN: INFIBR; ISSN: 0019-9567
PB American Society for Microbiology
DT Journal
LA English
AB Synthetic peptide vaccines which are derived from functional domains of Streptococcus mutans ***glucosyltransferases*** (GTF) have been shown to induce protective immunity in Sprague-Dawley rats after s.c. injection in the salivary gland region. Since mucosal induction of salivary immunity would be preferable in humans, the authors explored methods to induce mucosal antibody in the rat to the GTF peptide vaccines HDS and

HDS-GLU after intranasal administration. Several methods of facilitation of the immune response were studied: the incorporation of peptides in bioadhesive poly(D,L-lactide-coglycolide) (PLGA) ***microparticles*** , the use of monoepitopic (HDS) or diepitopic (HDS-GLU) peptide constructs, or the use of mucosal adjuvants. Salivary IgA responses were not detected after intranasal administration of diepitopic HDS-GLU peptide constructs in alum or after incorporation into PLGA ***microparticles*** . However, significant primary and secondary salivary IgA and serum IgG antibody responses to HDS were induced in all rats when cholera holotoxin (CT) or a detoxified mutant Escherichia coli heat-labile enterotoxin (R192G LT) were intranasally administered with HDS peptide constructs in PLGA. Coadministration of LT with HDS resulted in predominantly IgG2a responses in the serum, while coadministration with CT resulted in significant IgG1 and IgG2a responses to HDS. Serum IgG antibody, which was induced to the HDS peptide construct by coadministration with these adjuvants, also bound intact mutans streptococcal GTF in an ELISA and inhibited its enzymic activity. Thus, immune responses which are potentially protective for dental caries can be induced to peptide-based GTF vaccines after mucosal administration if combined with the CT or LT R192G mucosal adjuvant.

RE.CNT 57 THERE ARE 57 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 41 OF 44 USPATFULL on STN
AN 2000:109566 USPATFULL
TI Starch encapsulation
IN Keeling, Peter, Ames, IA, United States
Guan, Hanping, Ames, IA, United States
PA ExSeed GEnetics, L.L.C., Ames, IA, United States (U.S. corporation)
PI US 6107060 20000822
AI US 1997-941445 19970930 (8)
PRAI US 1996-26855P 19960930 (60)
DT Utility
FS Granted
EXNAM Primary Examiner: Minnifield, Nita; Assistant Examiner: Zaghmout, Ousama M-Faiz
LREP Nixon & Vanderhye P.C.
CLMN Number of Claims: 20
ECL Exemplary Claim: 1,7
DRWN 9 Drawing Figure(s); 12 Drawing Page(s)
LN.CNT 5322
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Hybrid polypeptides are provided formed with encapsulating regions from genes that encode for anabolic proteins. More particularly, the present invention relates to recombinant nucleic acid molecules that code for genes which encapsulate an attached protein within a matrix; preferably,

these genes encapsulate a desired ("payload") polypeptide within starch, and more specifically within the starch granule matrix. Expression vectors comprising these recombinant nucleic acid molecules, and hosts therefor, and more specifically the starch-bearing portions of such hosts, transformed with such vectors, are also provided. Preferably, grain containing a foreign protein encapsulated within the starch is provided, useful to produce mammalian, fish and avian food. The invention also encompasses methods of producing purified protein from starch and particularly from starch granules, and industrial uses of such protein.

L6 ANSWER 42 OF 44 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 4

AN 2000:204526 CAPLUS

DN 133:206513

TI Induction of secretory immunity with bioadhesive poly (D,L-lactide-co-glycolide) ***microparticles*** containing Streptococcus sobrinus ***glucosyltransferase***

AU Smith, D. J.; Trantolo, D. J.; King, W. F.; Gusek, E. J.; Fackler, P. H.; Gresser, J. D.; De Souza, V. L.; Wise, D. L.

CS Department of Immunology, Forsyth Dental Center, Boston, MA, 02115, USA

SO Oral Microbiology and Immunology (2000), 15(2), 124-130
CODEN: OMIMEE; ISSN: 0902-0055

PB Munksgaard International Publishers Ltd.

DT Journal

LA English

AB The effect of mucosal delivery of Streptococcus sobrinus ***glucosyltransferase*** (GTF) in bioadhesive poly (D,L-lactide-co-glycolide) (PLGA) ***microparticles*** on induction of salivary IgA and serum IgG antibody responses was measured in Sprague-Dawley rats. Prepns. of GTF/PLGA/gelatin ***microparticles*** , or PLGA/gelatin ***microparticles*** or GTF in alum, were administered four times at weekly intervals by intranasal or intragastric routes. Two s.c. injections of GTF in PLGA/gelatin ***microparticles*** or in alum were given to sep. groups of rats. Significant elevations in salivary IgA antibody levels to S. sobrinus GTF were obsd. only in the groups immunized intranasally 28 days after immunizations were begun. Five of six rats given the GTF ***microparticles*** intranasally had pos. salivary IgA antibody responses to GTF, and the mean salivary IgA antibody level of this group was 30-fold higher than any other mucosally or systemically immunized group. Salivary IgA responses in the GTF- ***microparticle*** group remained significantly higher than all other mucosally immunized groups for at least 10 wk after the primary immunization. All rats in this group demonstrated aspects of anamnesis following a more limited secondary course of intranasal administration. Intranasal administration of GTF in ***microparticles*** also induced a serum IgG response to GTF in some rats. After secondary intranasal GTF ***microparticle***

administration, several rats had sustained serum IgG antibody levels that were within the range of sera from rats s.c. injected with GTF in ***microparticles*** or in alum. Thus intranasal delivery of GTF-contg. bioadhesive ***microparticles*** induced the highest and longest lasting salivary immune response of any mucosal or systemic route or vehicle tested and could be expected to be a useful method for induction of mucosal immunity.

RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 43 OF 44 USPATFULL on STN

AN 1999:96245 USPATFULL

TI Immobilization of microogranisms on weakly basic anion exchange substance for producing isomaltulose

IN Sarkki, Marja-Leena, Kantvik, Finland
Heikkila, Heikki, Espoo, Finland
Viljava, Tapio, Kantvik, Finland

PA Xyrofin Oy, Kotka, Finland (non-U.S. corporation)

PI US 5939294 19990817

AI US 1997-857808 19970516 (8)

DT Utility

FS Granted

EXNAM Primary Examiner: Naff, David M.

LREP Scully, Scott Murphy & Presser

CLMN Number of Claims: 16

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 711

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Isomaltulose-forming microorganisms are immobilized on a carrier that is a weakly basic anion exchange substance in the form of a substantially non-compressible porous particulate solid material, and are used for isomerization of sucrose to isomaltulose. A preferred carrier contains microfibers or ***microparticles*** of diethylaminoethyl cellulose adherently bound by agglomeration with polystyrene. The isomerization may be a continuous conversion in one or more columns packed with the carrier. Isomaltulose may be hydrogenated to form isomalt for use in sweetening. Microorganisms can be immobilized on the carrier by feeding microorganisms to a column containing the carrier. After microorganism immobilization, the carrier may be treated with a crosslinking and/or flocculating compound. Regeneration of the carrier is carried out by removing microorganisms, washing and reloading with fresh microorganisms.

L6 ANSWER 44 OF 44 USPATFULL on STN

AN 1998:9338 USPATFULL

TI Substitutes for modified starch and latexes in paper manufacture

IN Nichols, Scott Edward, Johnston, IA, United States

PA Pioneer Hi-Bred International, Inc., Des Moines, IA, United States (U.S. corporation)

PI US 5712107 19980127

AI US 1995-485243 19950607 (8)

DT Utility

FS Granted

EXNAM Primary Examiner: Leary, Louise

CLMN Number of Claims: 20

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 583

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides methods of making paper utilizing glucans, produced by the ***glucosyltransferase*** C enzyme of the species Streptococcus mutans, instead of modified starches. The present glucans are functionally similar to the hydroxethyl modified starch and are particularly useful in the coating step of paper manufacture. The present glucans also exhibit thermoplastic properties and impart gloss to the paper during the coating step.